CASE REPORT

Meckel’s Diverticulitis. A rare cause of small bowel obstruction

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Abstract

Meckel’s Diverticulum is a sac-like protrusion of the intestinal wall. It is located at 40–60 cm from the caecum. In the majority of cases, Meckel’s Diverticulum is clinically silent, while complications are found in 4% of the population. Complicated diverticulitis is associated with the formation of abscess, fistula, bowel obstruction or frank perforation. We present a case of a 63-year-old woman with a distended abdomen, pain in the lower right abdominal quadrant, fever 37°C and where emergency exploratory laparotomy revealed that obstruction was caused by a bowel loop trapped by a mesenterium-diverticular band.

INTRODUCTION

Meckel’s Diverticulum is a sac-like protrusion of the intestinal wall. It is located at 40–60 cm from the caecum and has a triangular shape. It is found in 2% of the overall population and equally in both genders. In the majority of the cases Meckel’s Diverticulum is clinically silent, while complications are found in 4% of the population. Diverticulitis can be either uncomplicated or complicated. Complicated diverticulitis is associated with the formation of abscess, fistula, bowel obstruction or frank perforation.

CASE REPORT

We present a case of a 63-year-old woman who presented to the ER with umbilical pain, fever 37°C, nausea, distend abdomen and inability to pass wind or stool. Tests and imaging (X-Ray, CT) were performed and the patient went straight to the OR, for emergency exploratory laparotomy.

We used PubMed and Medline search engines for articles containing terms such as Meckel’s diverticulum and we selected articles, which were available in full text English language from 1995 to 2005. We excluded single case reports.

Following laparotomy, a gross distension of the small bowel and collapse of the large bowel was identified. The small bowel was subsequently delivered carefully and examined. Loops of distended small bowel were identified extending proximally from the duodenojejunal junction to the distal ileum. Thirty-five centimeters from the ileocecal valve, an 8-cm-long Meckel’s diverticulum had severe inflammation with the tip of it creating a symphysis band with the mesenterium (Fig. 1). Ileal loops were dilated at the superior part of the mechanical obstruction (Fig. 2). Obstruction was caused by trapping of a bowel loop by a mesenterium-diverticular band. After separating the band from the mesenterium, the ileal loop was released from the diverticulum. Resection of the Meckel’s diverticulum and closure of the bowel were done using a TA stapler. The small bowel was then decompressed and aspirated via the nasogastric tube.

The patient recovered without any complications and was discharged after 7 days of hospitalization. The diverticulum was confirmed as Meckel’s diverticulum by histological examination.

DISCUSSION

Meckel’s diverticulum is the most common congenital malformation of gastrointestinal tract (most studies suggest an...
Figure 1: 35 centimeters from the ileocecal valve, an 8-cm-long Meckel’s diverticulum had severe inflammation with the tip of it creating a symphysis band with the mesenterium.

Figure 2: Ileal loops were dilated at the superior part of the mechanical obstruction.
Meckel’s diverticulum is difficult. This is particularly true in the patients presenting with the symptoms other than bleeding. In a study of 776 patients by Kusumoto et al., 88% of the patients presenting with bleeding had a correct preoperative diagnosis versus 11% with symptoms other than bleeding [9].

The question which could arise is what should a surgeon do when an asymptomatic Meckel's diverticulum is discovered. A population-based study demonstrated a surgical complication rate of 7% for patients with a complicated Meckel's diverticulum and a complication rate of only 2% over a 20-year period for incidental diverticulectomy. The main complication is being obstruction secondary to adhesions. The ability to remove the diverticulum safely is the deciding factor. Deaths associated with the removal of Meckel’s diverticulum have been reported. In our experience, we believe it is safe to remove an incidentally discovered Meckel’s diverticulum in the absence of any complicating conditions, such as diffuse inflammation. Contraindications to an incidental resection include the presence of ascites, contamination of the abdominal cavity by feces.

The treatment of choice for the symptomatic Meckel’s diverticulum is surgical resection. This can be achieved either by the diverticulectomy or by the segmental bowel resection and anastomosis, especially when there is palpable ectopic tissue at the diverticular-intestinal junction, intestinal ischaemia or perforation (bowel obstruction). Diverticulectomy is adequate for the incidental Meckel’s diverticulum or when diverticulitis presents at the tip of the diverticulum. Segmental resection is recommended when the base is inflamed or if the patient presents with melena. There have been suggestions that the morphologic characteristics of the diverticulum should be considered when deciding on the extent of resection, the risk of complications in short, broad-based diverticula compared with long, thin-based diverticula. Thin diverticula may increase the risk of volvulus, intussusception or torsion, whereas short, broad-based diverticula can predispose to trapping of an enterolith, leading to inflammation, hemorrhage or obstruction.

Clinical manifestations arise from complications of this true diverticulum that are most common in males under 40–50 years of age and with a diverticulum longer than 2 cm. Preoperative diagnosis of a complicated Meckel’s diverticulum may be challenging.

CONFLICT OF INTEREST STATEMENT
None declared.

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