Meckel’s Diverticulum Presenting as Intestinal Obstruction Due to An Internal Hernia

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Meckel’s diverticulum poses a diagnostic problem because the symptoms due to it are not specific. The pathology associated with Meckel’s diverticulum is therefore discovered mostly as a complication in an acute abdomen. A patient is described who had an internal hernia due to a mesentero-diverticular band.

The 2% incidence of Meckel’s diverticulum in the general population is standard knowledge for most clinicians. Symptoms related to Meckel’s diverticulum are mostly due to the risk factors associated with the diverticulum but are not readily recognized. The clinical presentations are mostly acute arising from complications due to the diverticulum.

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Case Presentation

A 19-month-old female child was transferred from a peripheral general hospital where she had been admitted because of head injury due to a fall from a height. She began vomiting and developed abdominal distension 2 days later, and an abdominal X-ray showed features suggesting intestinal obstruction.

Further history revealed that the child had a habit of eating sand, and she had abdominal pain, loose motions, and vomiting for 3 days before the fall. She looked well hydrated, but was pyrexial (temperature 38°C) and was anaemic (Hb 7.5 g/dl). The abdomen was distended and slightly tender. Plain abdominal X-ray showed dilated proximal small intestine with multiple air-liquid levels. The diagnosis was intestinal obstruction.
Laparotomy was carried out: there was a moderate amount of serous peritoneal fluid, gross dilatation of the jejunum and proximal part of the ileum to a point of obstruction caused by a tight fibro-peritoneal band covered by fibrinous exudate and a small loop of intestine trapped beneath it (Fig. 1). When released, the band was found to be from the root of the mesentery to a segment of ileum, identified as a Meckel's diverticulum, and an ileal loop proximal to it had herniated beneath the band. The diverticulum was about 15 cm from the ileocaecal junction and had a 2 cm-wide base. Resection including the diverticulum and ileal anastomosis was carried out. Postoperative recovery was uneventful. Histology confirmed Meckel's diverticulum with no evidence of heterotopic tissue.

Discussion

Meckel's diverticulum is the congenital persistent juxtareral part of the embryonic omphalomesenteric (vitellinointestinal) duct.1 It causes symptoms in about 71% of persons who have it: abdominal pain, nausea, vomiting, rectal bleeding, abdominal distension, are frequent associated symptoms.2 The life-time risk of symptoms in the presence of Meckel's diverticulum is estimated at 4–6% and the risk is higher before the age of 2 years.3

Meckel's diverticulum poses a diagnostic challenge because there are no symptoms specific to it. The diagnosis is obscured by initial consideration of more common conditions which present similar clinical features: viz appendicitis, intestinal obstruction due to common causes, and intestinal polyps and angiomatosus malformations associated with bleeding per rectum. In acute clinical state it causes high morbidity.3

Intestinal obstruction due to Meckel's diverticulum most commonly results from intussusception with the diverticulum as the leading point. Internal hernia into a fold under a mesentero-diverticular band is uncommon, but occurs when there is hypermotility of the intestine. In the patient described above an initial diverticulitis, possibly worsened by a steroid used in the treatment of head injury, could have increased intestinal motility added to which the mesentero-diverticular band posed a high risk for internal hernia and obstruction of the small intestine.

References