Netherlands
The Journal of Medicine

PHOTO QUIZ

A young man with intermittent abdominal pain and anaemia: a peculiar finding

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CASE REPORT

A 23-year-old Asian man presented with a one-year history of intermittent cramping abdominal pain, followed by nausea and vomiting. At presentation, symptoms occurred two to three times a day and lasted for a few minutes to half an hour. Neither constipation nor diarrhoea or bloody stools were present and his weight was stable. Past medical history revealed a recent diagnosis of iron-deficiency anaemia for which he received iron supplements.

On physical examination the abdomen was soft with normal bowel sounds and no tenderness. Laboratory investigations showed microcytic anaemia (haemoglobin 7.7 g/dl) and no other abnormalities. Previous upper and lower endoscopy were unremarkable, with the exception of a mild non-specific gastritis for which he had been taking a proton-pomp inhibitor for two months.

Figure 1. *Abdominal CT, thickened small bowel wall within a proximal jejunum loop*

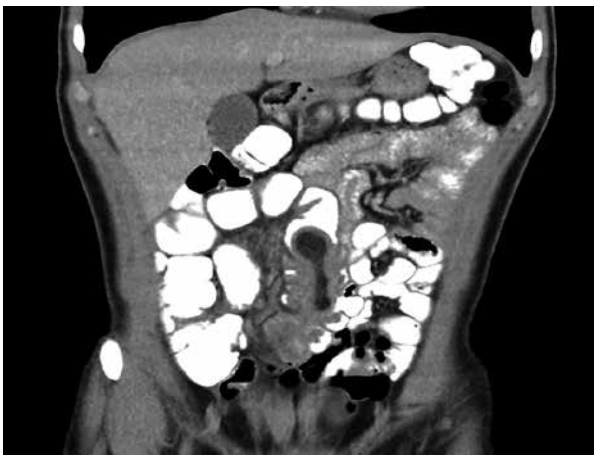
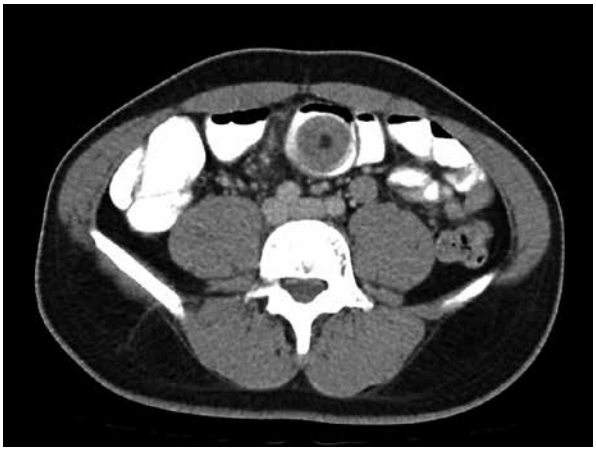


Figure 2. *Abdominal CT, axial plane, target-shape lesion*



Abdominal computed tomography demonstrated a thickened small bowel wall within a proximal jejunum loop (*figure 1*) as a target-shape lesion in the axial plane (*figure 2*).

WHAT IS YOUR DIAGNOSIS?

See page 434 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (PAGE 430)

A YOUNG MAN WITH INTERMITTENT ABDOMINAL PAIN AND ANAEMIA: A PECULIAR FINDING

DIAGNOSIS

Clinical history and radiological findings suggested an enteroenteric intussusception.

Surgical intervention showed invagination on a Meckel's diverticulum (*figure 3*) and enlarged mesenteric lymph nodes around it. Diverticulectomy was performed and histopathological examination revealed inflammation and ulcerations. The postoperative course was uneventful and after eight weeks the patient was asymptomatic.

Intussusception represents a rare form of bowel obstruction in adults, accounting for 1-5% of intestinal obstructions.[1] It is defined as the telescoping of a proximal segment of the gastrointestinal tract into the lumen of the adjacent distal segment. According to its location, intussusception can be classified into entero-enteric, if confined to the small bowel, colo-colic, involving the large bowel and ileo-colic, defined as prolapse of the terminal ileum within the ascending colon. It can also be classified by aetiology in benign, malignant or idiopathic.[1] Small bowel intussusception in adults is mostly secondary to intra-luminal pathologies: neoplasms, inflammatory lesions and, rarely, Meckel's diverticula.[1]

Meckel's diverticulum is the most common congenital malformation of the gastrointestinal tract (estimated prevalence 2-4%) and it results from incomplete obliteration of the vitello-intestinal duct.[2] Meckel's diverticula are often discovered incidentally, especially in adults during abdominal exploration.

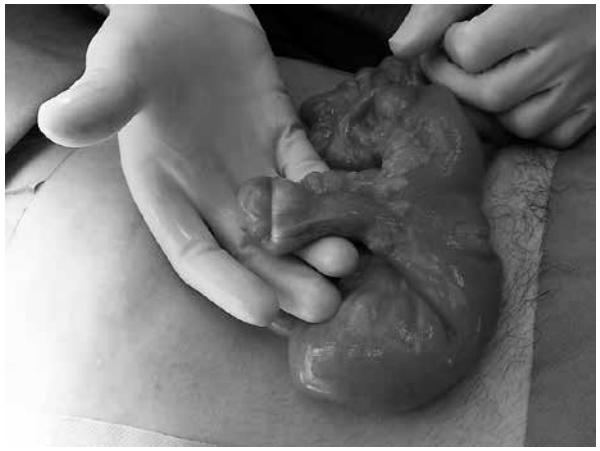
In this case, prophylactic diverticulectomy remains controversial. Park *et al.* recommend resection if there is a risk of a Meckel's diverticulum becoming symptomatic (i.e. age < 50 years, male sex, length of the Meckel's diverticulum > 2 cm and detection of abnormal features inside the diverticulum).[3] Conversely, Zani *et al.* suggest a conservative approach, since resection would unnecessarily expose patients to a higher risk of postoperative complications.[4] Currently, the recommendations are based on authors' experience and single-centre series, and little is known about long-term complications of incidental Meckel's diverticula left in situ.

When symptomatic, Meckel's diverticula present with symptoms of gastrointestinal obstruction or lower gastrointestinal bleeding.[2] Gastrointestinal obstruction is the most frequent complication in adults while children mainly present with bleeding, due to ectopic gastric mucosa.[2] Obstruction may result from intussusception, volvulus, diverticulitis or ulceration. Gastrointestinal bleeding can be chronic and lead to iron deficiency anaemia.[2]

Malignancy within a Meckel's diverticulum has been described in literature and is considered to be rare. Neuroendocrine tumours, leiomyosarcomas, gastrointestinal stromal tumours and adenocarcinomas have been reported.[5-8] Whether risk of cancer should affect management of asymptomatic Meckel's diverticula is unclear.[9,10]

Preoperative diagnosis of Meckel's diverticula is challenging and features on abdominal CT may aid in establishing the diagnosis. Even if unusual, this condition should be considered in the differential diagnosis of abdominal pain and anaemia in young adults.

Figure 3. *Surgical procedure showing invagination of a Meckel's diverticulum*



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