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PHOTO QUIZ

An adult with lower abdominal pain

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CASE REPORT

A 39-year-old male presented to our emergency department with a history of lower abdominal pain, vomiting and no stools for five days. Physical examination showed a not acutely ill patient with a normal blood pressure of 130/80 mmHg, a pulse of 75 beats/min and a body temperature of 37.2°C. Abdominal examination revealed sparse high-pitched bowel sounds, hypertympanic percussion and a distended abdomen. The pain was diffusely located in the lower abdomen. Laboratory investigations showed a normal blood count (haemoglobin 7.7 mmol/l, mean cell volume 71 fl), slightly abnormal renal function (urea 10.6 mmol/l, creatinine 99 µmol/l), normal leucocytes, no elevated liver enzymes and normal C-reactive protein level. A plain abdominal radiograph showed the presence of an ileus with dilated small bowel loops. A contrast-enhanced abdominal CT scan revealed abnormalities in the terminal ileum (*figure 1A* and *1B*).

Figure 1A. *CT scan (axial view): lower abdomen*

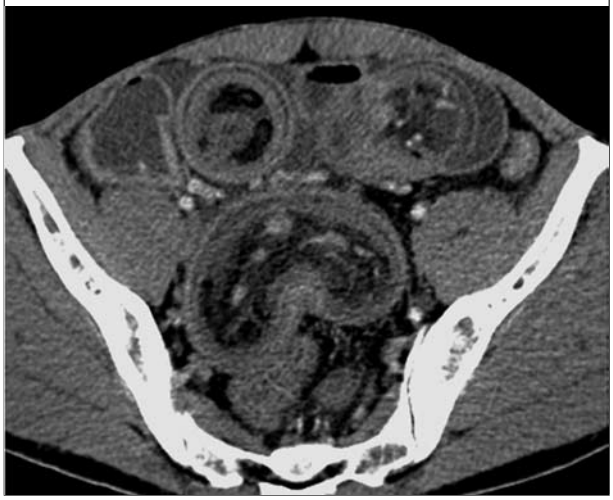
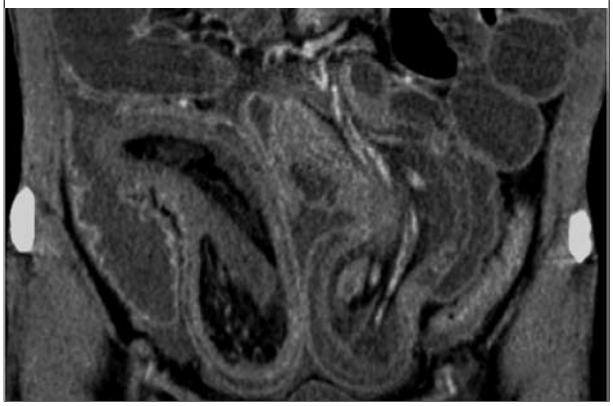


Figure 1B. *CT scan (coronal view): lower abdomen*



WHAT IS YOUR DIAGNOSIS?

See page 496 for the answer to this photo quiz.

DIAGNOSIS

On contrast-enhanced abdominal CT scan, the ileum appears as a target-like or sausage-shaped mass (*figure 1A*). There is a bowel-within-bowel configuration with mesenteric fat and (contrast-enhanced) mesenteric vessels within the terminal ileum (*figure 1B*). These findings are pathognomonic for an intussusception. On emergency laparotomy, an ileo-ileal intussusception was found and resected. Pathological examination of the resected bowel confirmed the diagnosis of intussusception (*figure 2*). No intraluminal lesion acting as a lead point for the intussusception was seen. The patient had an uneventful recovery.

Intussusception is a rare occurrence in adults and is defined as an invagination of a proximal segment of bowel (intussusceptum) into lumen of a distal segment (intussuscipiens). Approximately 5% of all intussusceptions occur in adults, accounting for 1% of all bowel obstructions.[1] It has often been stated that intestinal intussusception in adults is frequently caused by underlying disease with 70 to 90% of cases having a demonstrable cause based on discharge diagnosis or surgical results.[1,2]

Figure 2. *Resected distal ileum revealed necrosis (brownish discoloration) of the distal intussusceptum*

Intraluminal lesions alter normal bowel peristalsis and form leading edges for the intussusceptum.[3] The most common cause of benign enteric intussusception is postoperative adhesions, but Meckel's diverticulum, lipoma, polyps (associated with Peutz-Jeghers syndrome) and neurofibroma are also described as benign leading points. Malignant enteric lesions consisted primarily of metastatic disease. Metastatic melanoma, metastatic lymphoma and metastatic sarcoma are described as cause of enteric intussusceptions.

Although intussusceptions present acutely in children, adults may also present with acute, intermittent, or chronic problems. The predominant symptoms are usually those of bowel obstruction with nausea, vomiting and abdominal pain. Consequently, intussusception is often misdiagnosed initially in the adult population. The disease can be complicated by obstruction and haemorrhage leading to infarction and necrosis of the intussusceptum, which in severe cases may lead to perforation and peritonitis.

The widespread application of ultrasound and computed tomography in different clinical situations has increased the preoperative detection of intussusception. The CT scan is the most accurate technique, showing intussusception in approximately 80% of the cases.[1]

No treatment is needed for transient, nonobstructing enteric intussusception. In obstructed enteric intussusception resection is the only treatment option.

REFERENCES

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