CASE REPORT

Small bowel obstruction due to a jejunal enterolith: an unusual complication of jejunal diverticulitis

Lalita Malghan,¹ Ashley Uttley,² David Scullion²

¹Radiology, Leeds Radiology Academy, Leeds, UK
²Radiology, Harrogate District General Hospital, Harrogate, UK

Correspondence to
 Dr Lalita Malghan,
 lmalghan@yahoo.com

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SUMMARY

A 91-year-old woman presented with symptoms of acute bowel obstruction supported by clinical findings. A CT of the abdomen was performed which demonstrated jejunal diverticulosis with a single inflamed, wide necked diverticulum. A large enterolith was found to be impacted in the jejunum just distal to the area of inflammation resulting in small bowel obstruction. The patient underwent emergency laparotomy, which confirmed the CT findings. Small bowel resection was performed. The patient had an uneventful postoperative recovery.

BACKGROUND

This is a rare complication of an uncommon condition. Accurate diagnosis of this condition can be challenging for clinicians due to the wide variety of non-specific symptoms and breadth of complications. Similarly, the imaging findings can be difficult to interpret due to lack of knowledge of such uncommon complications. Very few similar cases have been published in the available literature.

CASE PRESENTATION

A 91-year-old woman presented with a 1 week history of feeling unwell, constipation for few days including not been able to pass flatus, lower abdominal pain, distension and vomiting.

Her vital observations at presentation were: temperature, 36.4°C; heart rate, 71/min; blood pressure, 114/68 mm Hg; respiratory rate, 17/min and saturations, 96% on air.

On examination, there was abdominal guarding with tenderness in the lower abdomen. Her medical history included hypertension, ischaemic disease, glaucoma and cholecystectomy.

INVESTIGATIONS

The patient's inflammatory markers were elevated, with a white blood cell count of $15.4 \times 10^9/L$ and C-reactive protein of 206. The lactate level was 1.9.

A CT scan was performed which confirmed jejunal diverticulosis with a single inflamed diverticulum (figure 1) and small bowel obstruction due to a migrated and impacted jejunal enterolith (figure 2). There was absence of gas in the biliary tree.

TREATMENT

Emergency laparotomy was performed and a short segment of jejunum was resected. At surgery, a hard mass like swelling was felt within the jejunal lumen at the point of obstruction.

OUTCOME AND FOLLOW-UP

Patient recovered from the surgery after a short stay and discharged from hospital well.

DISCUSSION

There are few published case reports in the literature regarding complications of jejunal diverticulosis. Even fewer describe acute small bowel obstruction due to an impacted enterolith.¹ In authors knowledge, we found three similar cases

Figure 1 A coronal image of CT abdomen and pelvis showing an inflamed jejunal diverticulum (arrow).

Figure 2 An axial image of CT abdomen and pelvis showing an enterolith in the small bowel (arrow) causing small bowel obstruction.

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Learning points

- ▶ Small bowel diverticulosis is uncommon and typically asymptomatic but can occasionally become symptomatic and develop complications.
- ▶ The clinical symptoms and presentation are non-specific and can potentially cause a significant delay in diagnosis.
- ▶ Radiological appearances can be challenging to interpret due to the uncommon nature of the disease and lack of awareness. CT scanning is a key preoperative investigation.
- ▶ The characteristic finding of a jejunal diverticulum on CT is an air containing round/ovoid structure with very thin walls projecting beyond the lumen of the small bowel.
- ▶ Complications include malabsorption, diverticulitis, perforation, bleeding and rarely enterolith formation and bowel obstruction.

where patients presented with coexisting jejunal diverticulitis with a dislodged enterolith causing acute small bowel obstruction.^{1–3}

The aetiopathogenesis of jejunal diverticulosis is unclear, although the current hypothesis focuses on abnormalities in the smooth muscle or myenteric plexus on intestinal dyskinesia and on high intraluminal pressures.⁴

A jejunal diverticulum is a pouch arising from the mesenteric border of the bowel. The incidence varies from 1% to 5%. The size of the diverticulum varies between few millimetres to few centimetres. They are more common in the elderly with slight male predominance.⁵

Jejunal diverticulosis is usually asymptomatic and found as an incidental finding during surgery or imaging. Rarely some patients become symptomatic and develop complications such as malabsorption, pain, vomiting, gastrointestinal bleeding, bowel obstruction and perforation.⁶ The rarity of this entity and variety of clinical symptoms poses diagnostic challenges to the clinicians.⁶ CT is a key diagnostic tool.

Identification of jejunal diverticulosis on imaging can also be challenging for radiologists. Barium follow through studies are helpful, but more recently these have been supplanted by CT. Typical CT findings are thin-walled outpouchings of small bowel which can contain fluid gas or ingested radiological contrast.⁷ Coronal reformatting is often very informative. It is vital in patients with jejunal diverticulosis to evaluate for associated complications during scan review.

Early diagnosis and management can have a significant effect on the outcome of this rare entity.

Contributors LM: Did the literature search, wrote the Initial draft of the case report and obtained patient consent. AU: Reviewed the CT images and issued the radiology report during the patient's admission to the hospital; helped with editing the manuscript. DS: Originally identified that this interesting case has several learning points and suggested to consider this for publication; helped with editing the case report and made appropriate suggestions.

Competing interests None declared.

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