

Chronic mesenteric ischaemia due to superior mesenteric artery occlusion

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Accepted 18 February 2023

DESCRIPTION

A woman in her 80s presented to the emergency department with acute abdominal pain 1 hour after a meal. She had a 3-month history of postprandial abdominal pain without a definitive diagnosis. She did not report diarrhoea or weight loss. Her medical history included atrial fibrillation and renal infarction, and she was taking orally administered edoxaban. On arrival, her vital signs were as follows: body temperature, 36.5°C; blood pressure, 129/91 mm Hg; heart rate, 51 beats/min; and oxygen saturation, 100%. Physical examination revealed persistent tenderness in the umbilical region. Her white cell count was $6.6 \times 10^9/L$, venous lactate level was 3.0 mmol/L and D-dimer was 1.4 µg/mL. Abdominal contrast-enhanced CT showed total occlusion of the proximal superior mesenteric artery (SMA) (figure 1). A three-dimensional volume-rendered CT showed collateral vessels connecting coeliac artery and SMA via the pancreaticoduodenal arcade (video 1). Based on her clinical presentation and CT findings, we finally diagnosed her with chronic mesenteric ischaemia (CMI) due to SMA occlusion. Her symptoms were relieved after an aorto-SMA bypass was performed without any complications.

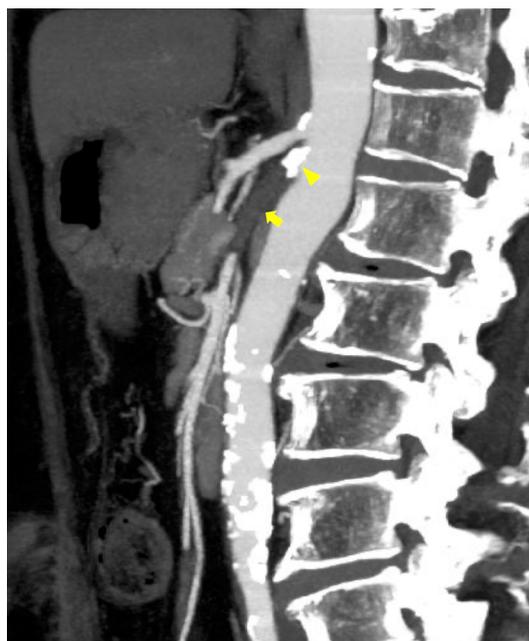


Figure 1 Sagittal images of abdominal contrast-enhanced CT showed calcification (yellow arrowhead) and total occlusion (yellow arrow) of the proximal superior mesenteric artery.



Video 1 A three-dimensional volume-rendered CT showed total occlusion of the superior mesenteric artery and collateral vessels connecting coeliac artery and superior mesenteric artery via the pancreaticoduodenal arcade.

More than 90% of cases of CMI are caused by chronically atherosclerotic severe stenosis or occlusion of the coeliac or SMA.¹ CMI is an under-recognised cause of postprandial abdominal pain, and early diagnosis is likely to be challenging because of non-specific symptoms.² However, prompt diagnosis and treatment of CMI are important to improve the quality of life of patients and to prevent lethal acute-on-chronic mesenteric ischaemia.³ Although CT angiography, including three-dimensional renderings, is useful for the diagnosis of CMI, elderly patients often have stenosis of mesenteric arteries, even if asymptomatic. Thus, in order to correctly diagnose CMI, physicians should pay attention to recurrent episodes of acute abdominal pain after eating and exclude other causes of abdominal pain.²

Learning points

- ▶ Chronic mesenteric ischaemia is an important but under-recognised cause of postprandial abdominal pain.
- ▶ Proximal occlusion of superior mesenteric artery (SMA) and collateral vessels connecting coeliac artery and SMA strongly suggest chronic mesenteric ischaemia.
- ▶ Physicians should be familiar with this rare disease in order to improve the quality of life of patients and to prevent lethal acute-on-chronic mesenteric ischaemia.

Acknowledgements We are grateful to Nobuko Okada, Fumiya Sugiyama, and Takahiro Uenishi for creating a reconstructive image of computed tomography, and to Seiko Shimizu and Hirokazu Takemoto for supervising them.

Contributors All authors contributed to the development of this manuscript. FI was responsible for literature search and writing of all manuscripts. YO and TI were supervisors.



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To cite: Inoue F, Okazaki Y, Ichiba T. *BMJ Case Rep* 2023;**16**:e254787. doi:10.1136/bcr-2023-254787

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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