Spontaneous isolated coeliac artery dissection

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DESCRIPTION

A man in his 40s who had visited a previous hospital, having sudden-onset epigastralgia, was transferred to our emergency room. Four hours before the onset of symptoms, he had eaten raw horse mackerel and salmon sushi. He had a 26 pack-year smoking history, hypertension, hyperlipidaemia and hyperuricaemia. He appeared ill, but was conscious with a blood pressure of 200/116 mm Hg and heart rate of 87 beats per minute. He had severe and persistent epigastralgia accompanied with left lumbar back pain, but his abdomen with no signs of peritoneal irritation. Laboratory findings showed elevated white blood cell count ($12.0 \times 10^9/L$), C reactive protein (0.65 mg/dL) and creatine phosphokinase (306 U/L), but troponin I was negative, lactate (1.4 mmol/L), and d-dimer (0.6 µg/mL) levels were within normal ranges. Electrocardiography revealed no abnormalities.

Initially, gastric anisakiasis was suspected because of the typical acute severe epigastralgia, which occurred within 12 hours of ingesting raw or undercooked seafood infested with nematodes of the genus *Anisakis*.¹ However, in this case, he had eaten sushi made with defrosted seafood, which was not a typical cause of gastric anisakiasis because parasitic *Anisakis* is killed by freezing at -20°C .² Although there is a wide range of diseases that can cause abdominal pain in the emergency room, vascular diseases should be suspected, especially when physical examination findings are lacking in patients with acute severe abdominal pain.³ Based on these findings, we decided to perform a contrast-enhanced abdominal CT to differentiate vascular diseases. The CT showed a dissection of the coeliac artery trunk and splenic infarction (figure 1). Therefore, spontaneous isolated coeliac artery dissection (SICAD) was diagnosed. He was admitted into the high care unit and was fasted. Blood pressure-lowering therapy, analgesics, and anticoagulation were started. His abdominal pain was relieved and blood pressure was well controlled on the second day of hospitalisation, and discharged on the 18th day of hospitalisation. Ultrasonography before discharge and after 1 year showed no change in the size of the false lumen, and no aneurysm formation in the coeliac artery.

SICAD without aortic dissection is considered an extremely rare condition. With the increasing use of CT to evaluate abdominal pain, SICAD has been diagnosed more frequently.⁴ The male-to-female ratio of SICAD patients was 9:1 with a high age prevalence in the 50s. Approximately 40% of patients with SICAD have hypertension or a smoking history.⁴ The main clinical manifestation of SICAD is a sudden onset of abdominal pain,⁴ although some cases are asymptomatic and incidentally found on CT.⁵ Among the morphological classification of SICAD, this case was diagnosed with type IIA, intramural haematoma only.⁴ The coeliac

Figure 1 Contrast-enhanced abdominal and pelvic CT showed a dissection of the coeliac artery trunk (white arrow heads) and splenic infarction (white arrows) (A: axial section and B: sagittal section).

artery branches into the common hepatic artery, left gastric artery and splenic artery, and the most documented end-organ infarction associated with SICAD is splenic infarctions, which occur in 11.2% of cases.⁶ The gold standard for the diagnosis of SICAD is CT angiography of the abdomen. Conservative management, including fasting, blood pressure reduction and pain control, was considered to be the most common initial treatment for SICAD. Complications of severe intestinal ischaemia or ruptured aneurysms are absolute indications for endovascular treatment or surgery.

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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.

Learning points

- ▶ Spontaneous isolated coeliac artery dissection (SICAD) is a rare disease.
- ▶ SICAD is more common in middle-aged men and the main clinical manifestation is a sudden onset of abdominal pain.
- ▶ Vascular diseases should be suspected, especially when physical examination findings are lacking in patients with acute severe abdominal pain.

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