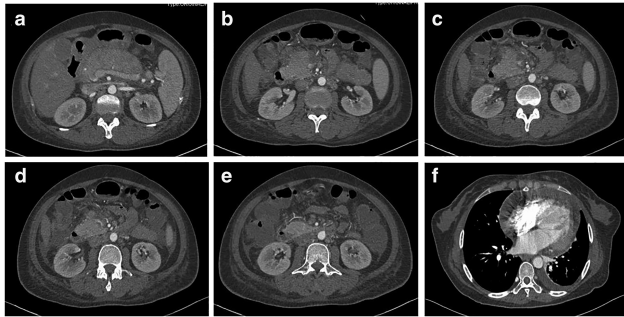


## EDUCATION AND IMAGING

**Gastrointestinal: A rare case of necrotic pancreatitis caused by Epstein–Barr virus**

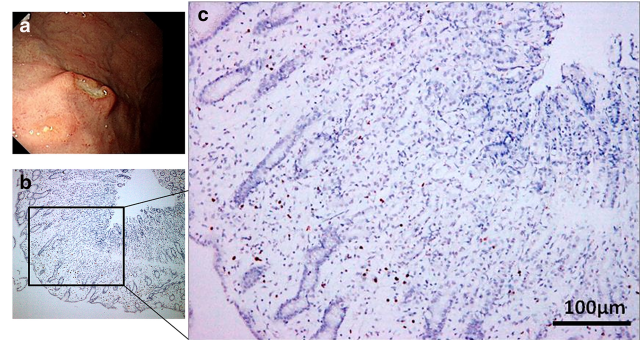
**Figure 1** Contrast-enhanced computed tomography showed: (a) pancreas was obviously swollen like sausage; (b–e) the density of the pancreatic parenchyma was uneven with large volume of reduced enhancement; (f) moderate pericardial effusion and mild pleural effusion on the left side.

A 45-year-old woman complained dry cough 2 months ago and had felt chest discomfort, fever, and abdominal pain for half a month. The fever was recurrent with the highest temperature of 39°C. She had no history of long-term alcohol consumption but underwent thymectomy due to thymic tumor and myasthenia gravis 9 years ago. Pyridostigmine bromide has been stopped for 3 years.

On admission, she presented anemic appearance, mild epigastric tenderness without rebound tenderness. Laboratory test showed that serum amylase and lipase were much higher than three folds upper limitation of normal. Leucocyte count  $2.71 \times 10^9/L$  with normal classification, hemoglobin 91 g/L, platelet count  $88 \times 10^9/L$ , and D-dimer 13.78 mg/L FEU. Calcium and triglycerides were within normal ranges. Fecal occult blood was positive.

Contrast-enhanced computed tomography (CECT) revealed her pancreas as sausage-like and is obviously swollen (Fig. 1a). The density of the pancreatic parenchyma was uneven with large volume of reduced enhancement (Fig. 1b–e). Due to severe necrosis of the pancreatic body, her pancreas was almost split into several parts (Fig. 1e). The severe pancreatic necrosis did not cause massive exudation as usual because the subacute necrotic lesion was wrapped within capsule-like rim (Fig. 1a–e). Moderate pericardial effusion and mild pleural effusion on the left side were detected (Fig. 1f). The tests for her IgG4, tuberculosis, and autoimmune disease were negative. All of cultures for blood, sputum, and urine were negative as well. Bone marrow biopsy showed normal morphology of the three lineage cells.

What kind of pancreatitis is this? Is there any relationship between the pancreatitis and pericardial effusion?



**Figure 2** Gastroscopical and histopathological images showed an ulcer in gastric body (a) and active gastritis (b) with the brown granules (c) indicating positive for Epstein–Barr virus (immunohistochemistry stain).

The sausage-like pancreas in CECT looks a little bit as IgG4-related pancreatitis. But it does not result in pancreatic necrosis normally. Gastroscopy found an ulcer in her gastric body (Fig. 2a). The ulcer biopsy presented active gastritis with polypoid hyperplasia. The brown granules in the gastric mucosa of immunohistochemistry staining indicated positive for Epstein–Barr virus (EBV, Fig. 2b,c). Her serum level of EBV-DNA was high as  $4.03 \times 10^5$  copies/mL. These evidences suggest that the patient suffered from systemic infection of EBV by which pancreatitis and pericarditis became the parts of this disease. Although supportive treatments were conducted, the patient gradually developed multiple organ failure and died 20 days later.

This EBV infection unusually occurred in an adult case possibly due to decreased immunity caused by thymus surgery. There have been less than 20 cases of EBV-pancreatitis reported in last 50 years' literature. Although pancreas is rare to be involved in systemic infection of EBV, EBV-pancreatitis may be developed into severe necrotic one but with less exudation and subacute onset. The prognosis of such necrotic pancreatitis is poor because of less understanding of its pathophysiology and no effective treatment against to EBV.

Contributed by

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