Endoscopic ultrasound diagnosis of a small splenic vein aneurysm

Splenic vein aneurysm (SVA) is an extremely rare vascular abnormality. Although endoscopic ultrasound (EUS) can detect vascular structures, the characteristic findings of an SVA have not been reported. We describe a patient with an SVA found incidentally on an EUS that was performed for gastric antral ectopic pancreas. The diagnosis was based on the findings during EUS using an electronic radial scanning echoendoscope (EG-530UR; Fujifilm Corp., Saitama, Japan) with color Doppler flow-mapping capabilities.

We identified a focally dilated distal splenic vein at the level of the pancreatic tail (● Fig. 1 a, b), and a venous flow signal was detected by pulsed-wave Doppler ultrasound (● Fig. 1c). Based on these findings, we diagnosed an SVA. Subsequent venous-phase three-dimensional computed tomography angiography (CTA) revealed a venous aneurysm on the splenic vein, confirming the final diagnosis of SVA (● Fig. 2).

A splenic artery aneurysm (SAA) is similar to an SVA in form and shape, and must be distinguished from an SVA. We previously reported the characteristic EUS findings of SAAs [1]. EUS using pulsed-wave Doppler mode shows a pulsating arterial wave in an SAA. In contrast, it shows continuous flow in an SVA. Therefore, we believe that the typical EUS findings of an SVA are focal dilatation of the splenic vein in B-mode images with continuous flow in the pulsed-wave Doppler mode.

The best treatment strategy for incidentally detected asymptomatic SVAs remains controversial [2,3]. We elected to monitor this lesion rather than perform surgery, and there was no change on either abdominal ultrasound or EUS at the 48-month follow-up. To our knowledge, this is the first reported case of an SVA diagnosed by EUS.

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Fig. 2 Three-dimensional computed tomography angiography showing an aneurysm (17 mm in diameter) at the hilum of the splenic vein.

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