A schwannoma is a benign peripheral nerve sheath tumor originating from Schwann cells [1]. Although schwannomas appear as well-demarcated hypoechoic masses on endoscopic ultrasonography (EUS) [2], there are few reports on pancreatic schwannoma diagnosed by EUS. A pancreatic schwannoma is difficult to diagnose preoperatively because of the lack of established imaging characteristics. We present a case of pancreatic schwannoma that was diagnosed by contrast-enhanced EUS and endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA).

A 54-year-old man was admitted to our hospital with a 12-mm tumor in the pancreatic body. The tumor was revealed on ultrasonography during a medical check-up without any symptoms. Contrast-enhanced computed tomography revealed a 10-mm hypovascular tumor in the pancreatic body (▶Fig. 1). Magnetic resonance imaging revealed hypointensity on T1-weighted images, hyperintensity on T2-weighted images, and hyperintensity on diffusion-weighted images (▶Fig. 2). No abnormalities were observed on magnetic resonance cholangiopancreatography. EUS showed a 12-mm, clear-boundary, solid, round, and hypoechoic tumor in the pancreatic body. Contrast-enhanced EUS showed a hypovascular tumor compared with the surrounding pancreatic parenchyma (▶Fig. 3), and contrast-enhanced EUS findings were observed continuously over 2 minutes (▶Video 1). We performed EUS-FNA with a 22-gauge needle (Sono Tip Pro Control; Medi-Globe GmbH, Rosenheim, Germany) to make a pathological diagnosis. Histopathological examination revealed a proliferation of spindle cells. These tumor cells were positive for S-100 protein and negative for c-kit and desmin in immunohistochemical staining (▶Fig. 4). Based on these findings, the lesion was diagnosed as a schwannoma. The patient was carefully monitored without surgical resection.

Contrast-enhanced EUS images of this tumor had a slightly delayed enhancement; therefore, a solid pseudopapillary neoplasm and pancreatic neuroendocrine neoplasm were considered as differential diagnoses [3]. In conclusion, small
and solid schwannomas may resemble solid pseudopapillary neoplasms and pancreatic neuroendocrine neoplasms. Therefore, contrast-enhanced EUS and EUS-FNA may be useful in avoiding surgical resection.

Competing interests

The authors declare that they have no conflict of interest.

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Video 1 Hypovascular tumor compared with surrounding pancreatic parenchyma on contrast-enhanced endoscopic ultrasonography, observed continuously over 2 minutes. Cystic components were undetected. Endoscopic ultrasound-guided fine-needle aspiration was performed using a 22-gauge needle.

Fig. 4 Histopathology of endoscopic ultrasound-guided fine-needle aspiration. a Fascicles of spindle cells were observed (hematoxylin and eosin stain; high power field). b Immunohistochemical staining of these cells was positive for S-100 protein (high power field).