A case of pancreatic schwannoma with a focus on contrast-enhanced endoscopic ultrasonography

► **Fig. 1** Contrast-enhanced computed tomography revealed a 10-mm hypovascular tumor (arrow) in the pancreatic body.

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 of the tumor 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

► **Fig. 2** Magnetic resonance imaging and magnetic resonance cholangiopancreatography. **a** A T2-weighted image shows a hyperintensity (arrow). **b** A diffusion-weighted image shows a hyperintensity (arrow).

► **Fig. 3** Contrast-enhanced endoscopic ultrasonography showed a hypovascular tumor compared with the surrounding pancreatic parenchyma.

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

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).

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.

Endoscopy_UCTN_Code_CCL_1AF_2AZ_3AB

Competing interests

The authors declare that they have no conflict of interest.

The authors

Takao Iemoto¹, Ayaka Sasaki¹, Tsuyoshi Sanuki¹, Yuki Yamamoto²

¹ Department of Gastroenterology, Kita-Harima Medical Center, Ichiba, Ono, Hyogo, Japan

² Department of Pathology, Kita-Harima Medical Center, Ichiba, Ono, Hyogo, Japan

Corresponding author

Tsuyoshi Sanuki, MD

Department of Gastroenterology, Kita-Harima Medical Center, 926-250 Ichiba-cho, Ono, Hyogo, 675-1392, Japan
Fax: +81-794-62-9931
tssanuki@gmail.com

References

- [1] Verocay J. Zur Kenntnis der Neurofibrome. Beitr Pathol Anat 1910; 48: 1–69
- [2] Ma Y, Shen B, Jia Y et al. Pancreatic schwannoma: a case report and an updated 40-year review of the literature yielding 68 cases. BMC Cancer 2017; 17: 853
- [3] Ishikawa T, Itoh A, Kawashima H et al. A case of solid-pseudopapillary neoplasm, focusing on contrast-enhanced endoscopic ultrasonography. J Med Ultrason 2011; 38: 209–216

Bibliography

Endoscopy 2022; 54: E166–E167

DOI 10.1055/a-1422-1763

ISSN 0013-726X

published online 28.4.2021

© 2021. Thieme. All rights reserved.

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at
<https://mc.manuscriptcentral.com/e-videos>