

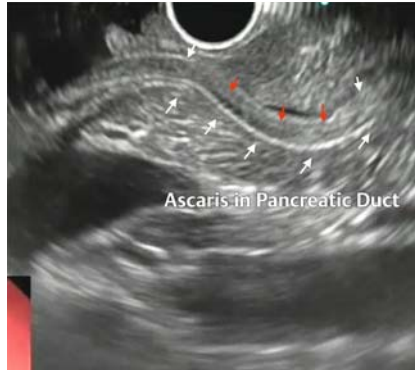
## Recurrent acute pancreatitis due to pancreatic duct ascariasis in a young man



► **Fig. 1** Contrast-enhanced computed tomography (CT) scan showing a linear hypodense structure in the second part of the duodenum.



► **Fig. 4** The *Ascaris* worm after removal.



► **Fig. 2** Endoscopic ultrasound showing the characteristic "strip sign" (two linear parallel echogenic lines without any acoustic shadow; white arrow) and central hypoechoic rim (inner tube sign; red arrow) typical of ascariasis in the pancreatic duct.



► **Fig. 3** Endoscopic view showing the *Ascaris* worm popping out through the papilla.



► **Video 1** Video demonstrating the characteristic endoscopic ultrasound features of an *Ascaris* worm in the pancreatic duct, which is then removed endoscopically.

A 26-year-old man presented with abdominal pain and vomiting for 7 days. He had had similar complaints a few months previously. His laboratory evaluation showed a raised serum amylase (878 IU/dL) and a bulky pancreas on ultrasonography of the abdomen. Other etiological work-up for acute pancreatitis was normal. Contrast-enhanced computed tomography (CT) scanning re-

vealed a normal pancreas with a linear hypodense structure in the second part of the duodenum (► **Fig. 1**). Endoscopic ultrasound (EUS) was performed to further evaluate the cause of this patient's recurrent pancreatitis. A linear echoendoscope (UCT-180; Olympus, Tokyo, Japan) was used for the pancreatobiliary examination. The gall bladder and common bile duct were normal

and anechoic. Evaluation of the pancreas and pancreatic duct was initiated in the second part of the duodenum with the scope in the short position. At the level of the papilla, two linear parallel echogenic lines without any acoustic shadow (the "strip sign") and a thin central hypoechoic rim (the "inner tube sign") were seen within the pancreatic duct (► **Fig. 2**; ► **Video 1**). Tracing the lines

further showed that the linear echogenic strip was occupying the entire duct and mimicking a pancreatic ductal stent.

After complete examination of the pancreas, the echoendoscope was positioned at the papilla and switched to endoscopy mode. A creamy white *Ascaris* worm could be seen popping partially out from the papilla (► **Fig. 3**). The worm was grasped with rat-tooth forceps and removed along the scope (► **Fig. 4**). Deworming was done for the patient and close family members and the patient has not suffered from any further episodes of abdominal pain as of his last follow-up.

Pancreatic ascariasis is a rare cause of acute pancreatitis even in endemic regions. The characteristic appearance on endosonography of the “strip sign” and “inner tube sign” is the key to diagnosis in these cases [1]. Endoscopic removal of the worm gives prompt relief of symptoms and subsequent deworming is essential to prevent recurrences.

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## Competing interests

None

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## Bibliography

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