Diagnosis of a mucinous pancreatic cyst and resection of an intracystic nodule using a novel through-the-needle micro forceps

Fig. 1 Micro forceps inside a 19 G fine-needle aspiration needle.

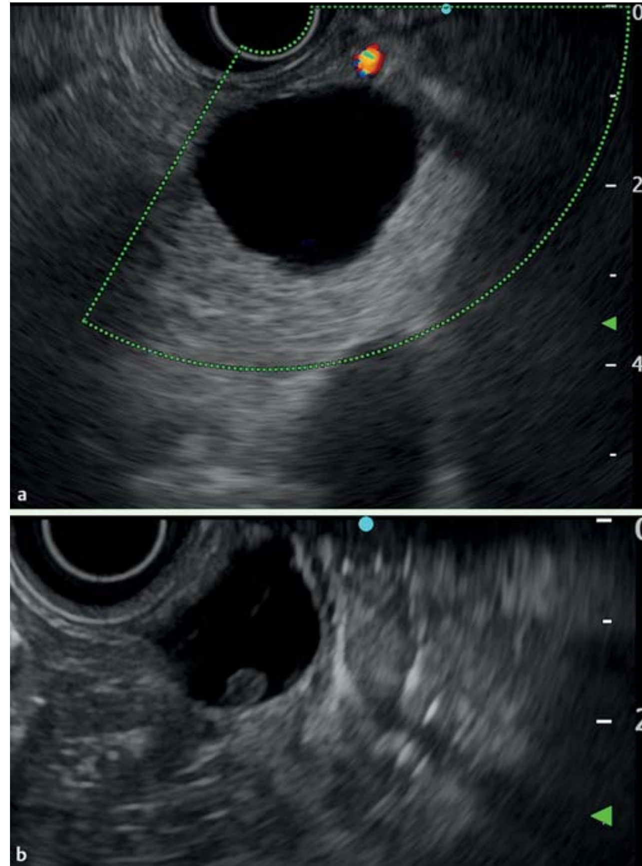

Fig. 2 Endoscopic ultrasound of pancreatic cyst with an intracystic nodule.
a The pancreatic cyst. Color Doppler was used to exclude major vessels prior to puncture.
b A nodule could be seen inside the cyst.

Pancreatic cystic lesions (PCLs) are detected in over 2% of patients who undergo computed tomography (CT) and magnetic resonance imaging screening [1, 2]. Most PCLs are harmless, but some have the potential for malignant transformation. The management of PCLs is challenging, with high resource use. The standard option for the acquisition of cellular material from PCLs is endoscopic ultrasound (EUS)-guided fine-needle aspiration (FNA). Although many types of needles are available [3], it is usually not possible to obtain a reliable biopsy from the cyst wall for a more certain histological diagnosis. In four recently reported cases, a through-the-needle forceps was used to obtain biopsies from PCLs [4–6]. We report the first case in which a novel through-the-needle micro forceps (Moray, US Endoscopy, Ohio, USA) (▶ **Fig. 1**) was used to diagnose a PCL, and to biopsy and resect an intracystic nodule.

The patient was an 85-year-old woman with an incidental finding of a 30 × 20 mm solitary PCL in the body of the pancreas on CT scan. The finding was also apparent on EUS. The lesion showed no connection with the pancreatic ducts, but a small nodule could be seen inside the cyst (▶ **Fig. 2 a, b**). A 19-G FNA needle (EchoTip Ultra; Cook Medical, Limerick, Ireland) was used to access the cyst. After the stylet was removed, a micro forceps was advanced through the FNA needle into the cyst, and four biopsies were taken from the cyst wall. In addition, the cyst fluid, which was serous, was aspirated. The nodular lesion was biopsied and then resected (▶ **Video 1**).
The patient was observed for 2 hours after the procedure, and then discharged. No complications were reported at 2 weeks' follow-up. The cyst fluid revealed few mucinous cells. Carcinoembryonic antigen and amylase levels were in the normal range. The biopsies showed mucinous epithelium consistent with a mucinous cyst, and a nodule made up of connective tissue with a mucinous lining (▶ **Fig. 3**).

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Competing interests: None

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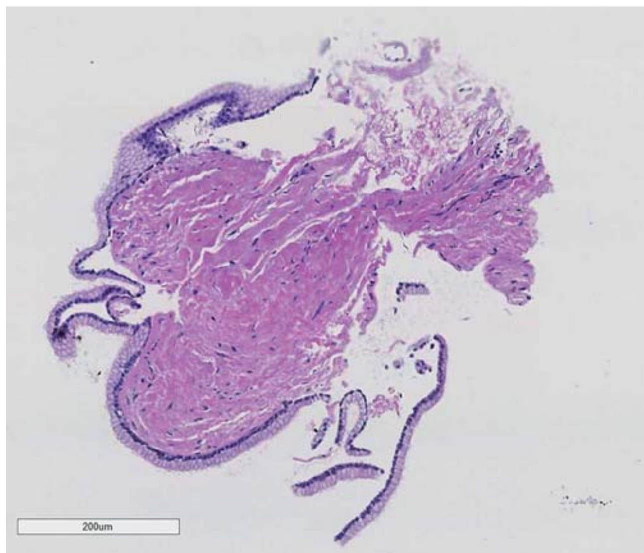

Fig. 3 Biopsy specimen of the nodule showing mucinous cells (hematoxylin and eosin, × 285).

Video 1

Endoscopic ultrasound-guided biopsy of pancreatic cyst wall using a through-the-needle micro forceps (Moray, US Endoscopy, Ohio, USA).

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