Pancreatic metastasis from gastric carcinoma diagnosed by endoscopic ultrasound-guided fine-needle aspiration

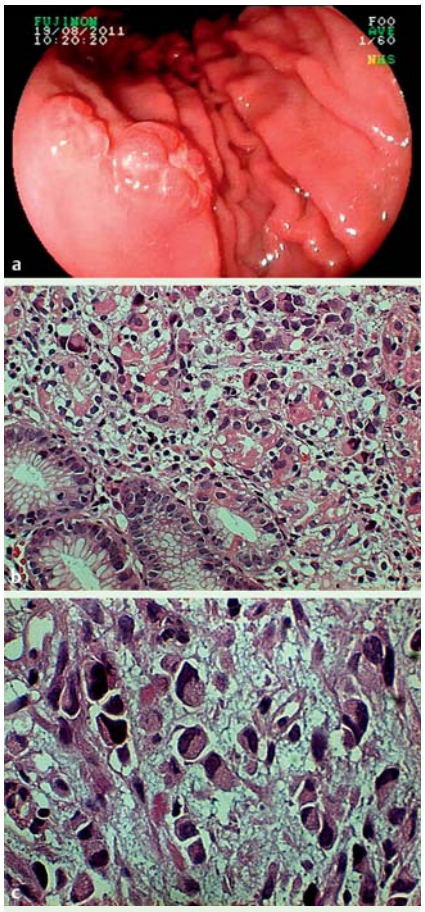

Fig. 1 **a** A 1.2 × 0.8 cm sized, Borrmann type 2 lesion at the greater curvature of the gastric body. **b** Histomorphologic appearance of the transition between neoplasia and normal gastric mucosa, demonstrating a poorly differentiated adenocarcinoma composed mainly of marked pleomorphic cells with signet ring cells (hematoxylin and eosin; original magnification × 200). **c** High magnification image of endoscopic biopsy specimen, demonstrating gastric carcinoma with discohesive epithelial pleomorphic cells with signet ring cells (hematoxylin and eosin).

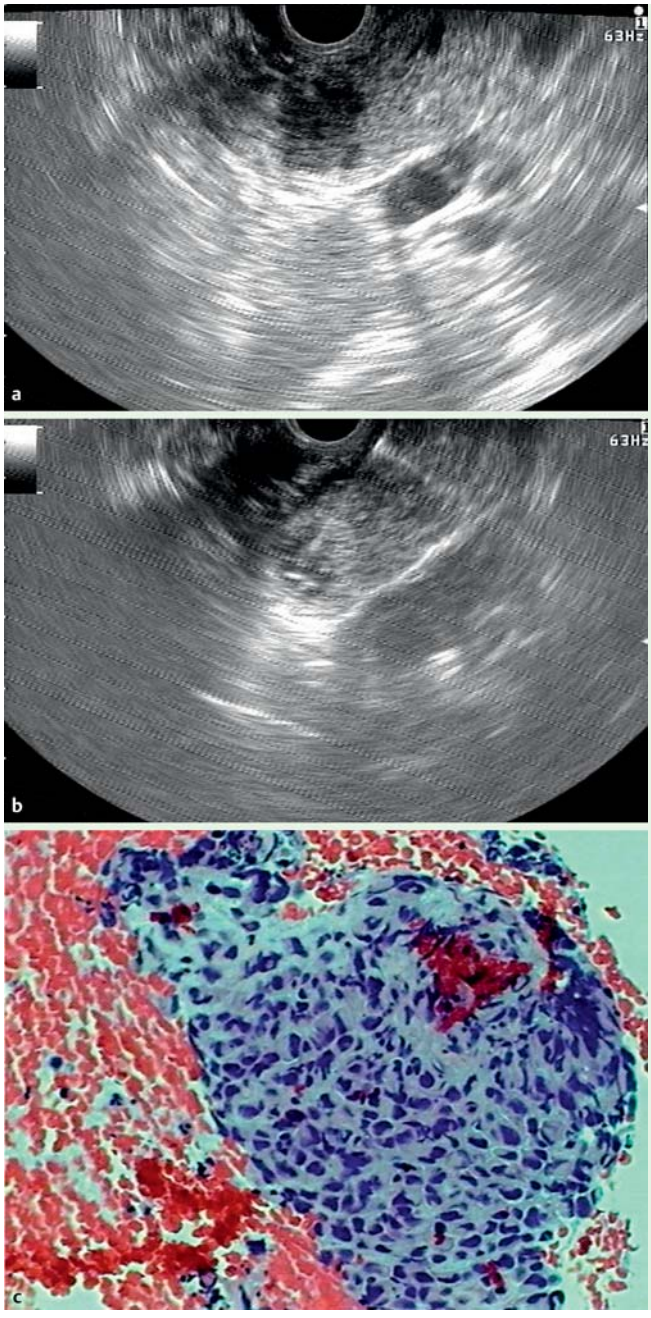

Fig. 2 **a** Linear-array endosonography demonstrating a hypoechoic homogeneous lesion with well-defined borders in the pancreatic body measuring 10.2 × 9.6 mm. Note the normal caliber of the main pancreatic duct on the righthand side of the figure and the lack of continuity of the lesion and the gastric wall. **b** Endoscopic ultrasound-guided fine-needle aspiration of the pancreatic nodule with a 22-gauge needle. **c** Poorly differentiated adenocarcinoma composed of discohesive, pleomorphic small and medium-sized malignant cells with occasional signet ring cells (cell block; hematoxylin and eosin; original magnification × 200).

Upper digestive endoscopy in a 36-year-old woman complaining of epigastric pain revealed an ulcerative lesion in the gastric body (▶ **Fig. 1a**). Endoscopic biopsies confirmed a gastric adenocarcinoma (▶ **Fig. 1b, c**). Endoscopic ultrasonography for cancer staging demonstrated a T2 gastric lesion, and a solid lesion measuring 10.2 mm × 9.6 mm in the pancreatic body (▶ **Fig. 2a**). Histologic analysis of biopsy samples obtained by endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA; ▶ **Fig. 2b**) showed neoplastic cells with the same histologic findings as those from the primary gastric cancer (▶ **Fig. 2c**). Chest and abdominal computed tomography detected additional lung and liver metastases, but no pancreatic lesion was found. Palliative chemotherapy was planned for the patient.

Secondary involvement of the pancreas by systemic malignancies has been reported for up to 3% of solid pancreatic lesions [1], although in autopsy studies rates vary between 3% and 12% [2]. Renal carcinoma is the most common cancer to cause pancreatic metastases, followed by colorectal, lung, and breast carcinoma, as well as melanoma [3,4]. Hematogenic

gastric metastases are usually to the liver and the gut, although the lungs, adrenal glands, and bones can be affected. Pancreatic metastases of gastric cancer are extremely rare.

There are no radiological findings that are pathognomonic of pancreatic metastases [5]. Metastatic pancreatic involvement can manifest as a single mass, multifocal nodularity, or diffuse enlargement of the pancreas [2]. Where tumors occur in the pancreatic head, the main pancreatic duct and the common bile duct can be dilated, and in such cases the tumors are usually misdiagnosed as primary pancreatic malignancies [5]. Endoscopic ultrasound demonstrates a rounded, well-defined lesion with a homogeneous isoechoic or hypoechoic pattern [4]. Histologic confirmation of pancreatic tumors by means of EUS-FNA in patients with a previous or synchronous history of extrapancreatic malignancy is the best method for the diagnosis of pancreatic metastases (sensitivity 84 % [3]), allowing appropriate clinical management to be started without the need for additional time-consuming diagnostic procedures.

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Competing interests: None

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Bibliography

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