

Endoscopic ultrasound-guided fine needle aspiration diagnosis of a focal fatty mass in the pancreas

Focal fatty masses of the pancreas, which include focal fatty infiltration, lipoma, and liposarcoma, are rare entities [1]. A well-differentiated lipogenic liposarcoma can mimic a benign lesion on radiologic examination and only cytohistology can resolve the doubt [2].

A 60-year-old woman was referred to our department because of an incidental ultrasound diagnosis of a lesion in the head of the pancreas. The patient was asymptomatic. An unenhanced computed tomography (CT) scan showed a 43-mm homogeneous, hypodense lesion at the pancreatic head (● Fig. 1 a). Abdominal magnetic resonance imaging (MRI) showed the lesion to be hypointense on fast imaging employing steady-state acquisition (FIESTA) with fat saturation (● Fig. 1 b) and hyper-

intense on T2-weighted fast-spin echo (FSE) acquisition without fat saturation (● Fig. 1 c). No clear contact with abdominal fat was seen.

An endoscopic ultrasound (EUS) showed a lobulated, ill-defined, heterogeneous lesion, which was slightly hypoechoic compared with the surrounding pancreatic parenchyma but with internal hyperechoic strands (● Fig. 2 a). The appearance was compatible with both a pancreatic lipoma and focal fatty infiltration, but even a liposarcoma could not be excluded. For this reason, we decided to perform an EUS-guided fine needle aspiration (FNA) with a 19-gauge needle (one passage) (● Fig. 2 b), which revealed clearly visible fat globules on the smears (● Fig. 3 a).

Cytohistologic examination showed mature adipocytes characterized by large fat droplets and eccentrically placed small nuclei without atypia. The adipocytes were interspersed with islands of normal pancreatic tissue (● Fig. 3 b, c). Immunohistochemical staining for Ki-67 showed no mitotic activity (● Fig. 3 d).

This focal fatty mass of the pancreatic head had some of the characteristics of a lipoma (no clear contact with abdominal fat on imaging), and some of focal fatty infiltration (no clear cytohistologic demarcation from pancreatic parenchyma) [1, 2]. This difficulty in distinguishing between these nosologic entities has been previously reported, but a clear distinction is not necessary because conservative treatment is indicated for both types of lesion. EUS-FNA, on the other hand, permits clear classification of such lesions where the differential diagnosis includes liposarcoma, which has a surgical indication. Only three other cases of EUS-FNA of a focal fatty mass of the pancreas have been reported [3–5], but considering the

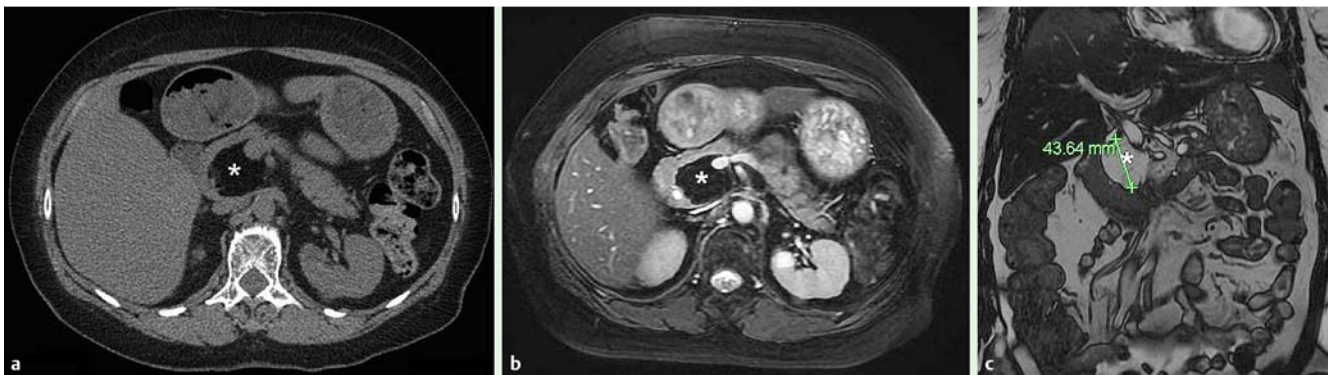


Fig. 1 Imaging of the lesion in the pancreatic head. **a** Computed tomography (CT) scan showing a hypodense lesion (*) in the pancreatic head. **b** Magnetic resonance imaging (MRI) scan showing the lesion is hypointense on fast imaging employing steady-state acquisition (FIESTA) with fat saturation in axial view; and **c** hyperintense on T2-weighted fast-spin echo (FSE) acquisition without fat saturation.

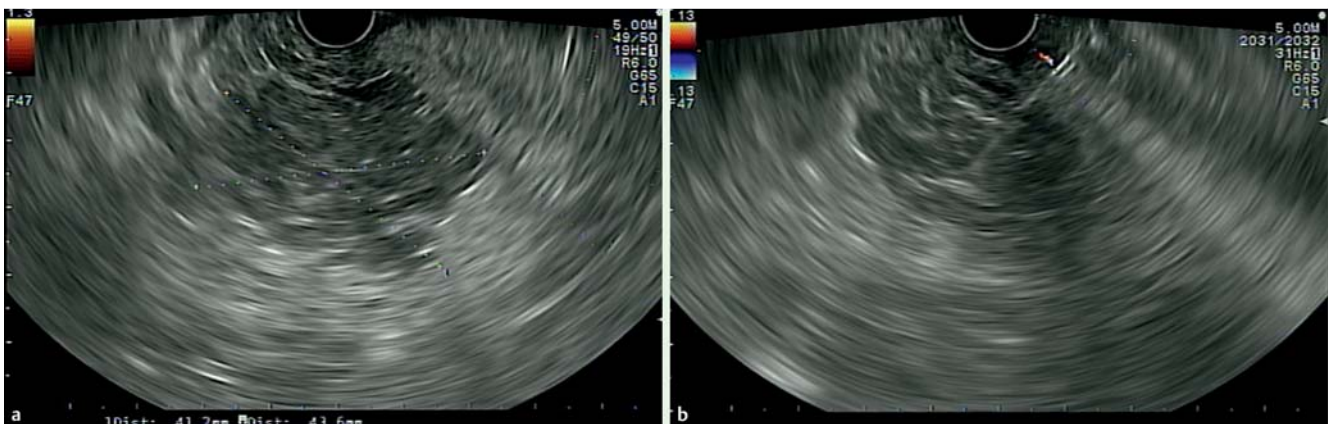


Fig. 2 Endoscopic ultrasound (EUS) images showing: **a** a lobulated, ill-defined, heterogeneous lesion, which is slightly hypoechoic compared with the surrounding pancreatic parenchyma but with internal hyperechoic strands; **b** EUS-guided fine needle aspiration (FNA) being performed with a 19-gauge needle.

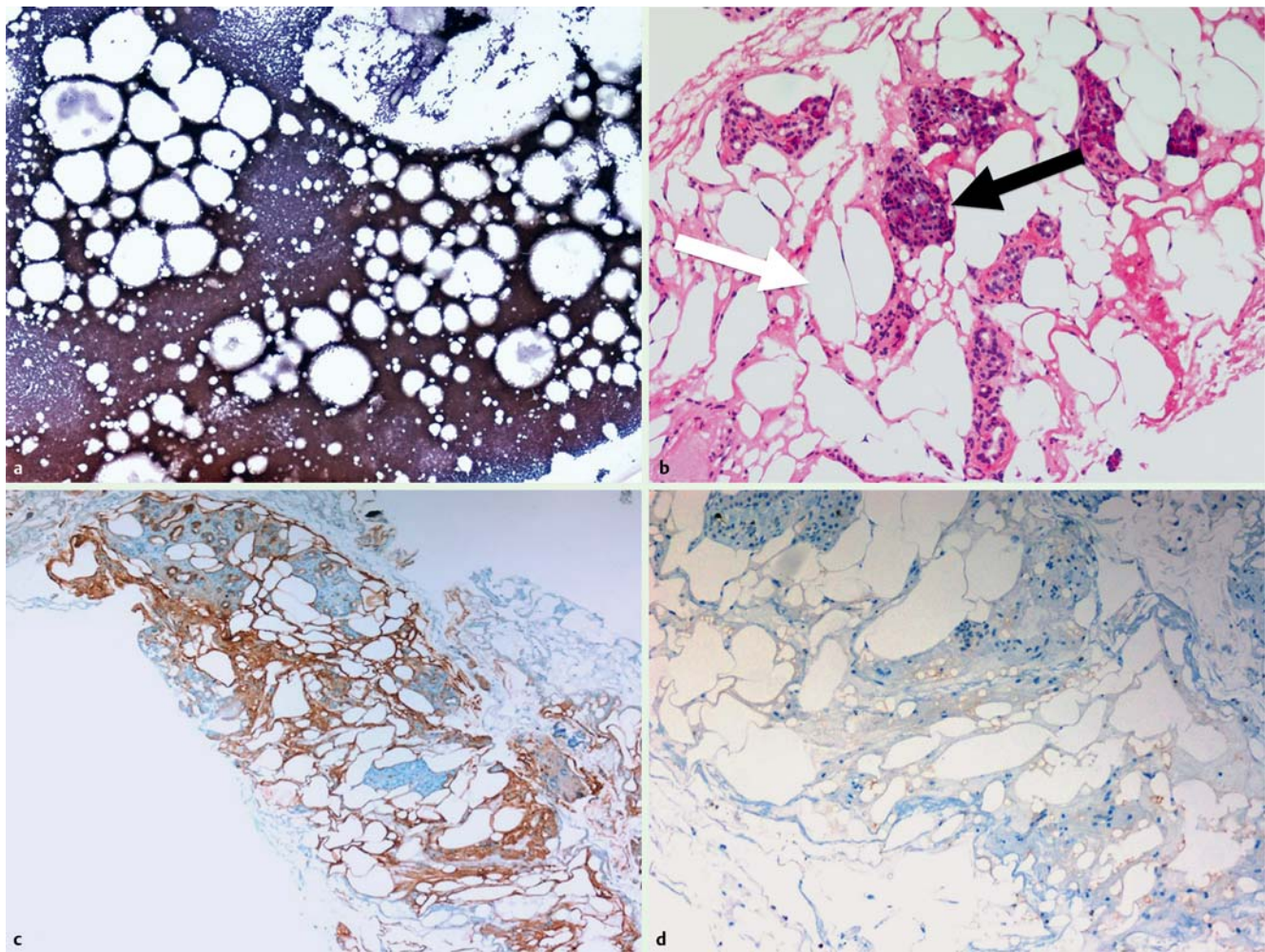


Fig. 3 Histocytological appearance showing: **a** on Hemacolor staining of the smear, several round empty spaces, both singly and in groups (most likely adipose tissue), with no atypical cells; **b** on a hematoxylin and eosin (H&E)-stained section, adipose tissue (white arrow) without atypia, interspersed with islands of normal pancreatic acini (black arrow); **c** on an S100-stained section, adipose tissue and islands of normal pancreatic acini; **d** on Ki-67 staining, the adipose tissue is negative, indicating no mitotic activity.

low probability of complications and the potential benefit for the patient, EUS-FNA should be considered for such pancreatic lesions.

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