

## Endosonographic and elastographic features of a rare epidermoid cyst of an intrapancreatic accessory spleen

Accessory spleens are found in approximately 10% of the general population, of which 16% are intrapancreatic [1]. A previously healthy 49-year-old patient was referred to our tertiary center for further evaluation of a pancreatic mass. She had initially presented to another hospital with nonspecific abdominal pain. An abdominal computed tomography (CT) scan had revealed a solid mass in the tail of the pancreas. Endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) was suggestive of a pancreatic neuroendocrine tumor (PNET).

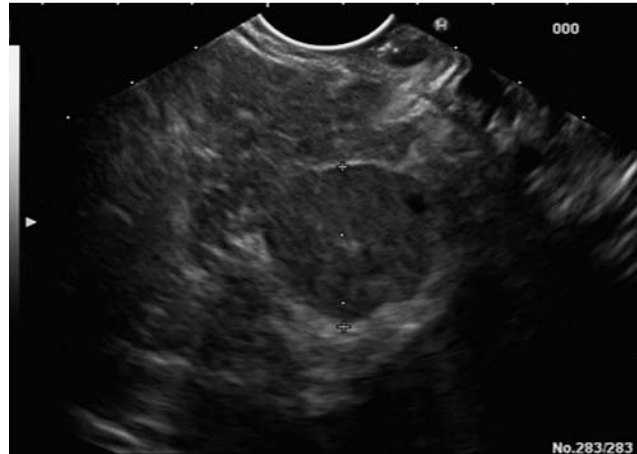
At our institution, the patient had a normal physical examination with no lymphadenopathy, organomegaly, or a palpable abdominal mass. The patient was referred for EUS-guided tattooing to guide laparoscopic distal pancreatectomy. The EUS revealed a hypochoic, 2.3-cm mass in the tail of the pancreas. The mass was round and homogeneous, with well-demarcated and sharp borders, and a small cystic component (● Fig. 1).

EUS-elastography showed inhomogeneous hardness as compared with the surrounding tissue (● Fig. 2).

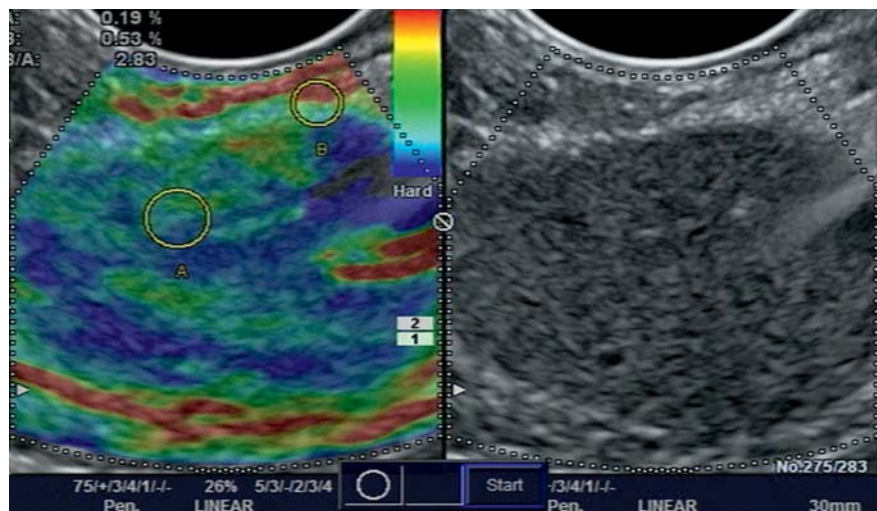
EUS-guided tattooing was carried out by injecting 2.5 mL of sterile, purified carbon particle just proximal to the lesion as the needle was withdrawn to the surface of the pancreas (● Fig. 3).

The patient subsequently underwent laparoscopic spleen-preserving distal pancreatectomy without complications. The tattoo was readily identified and demarcated a precise line of resection. Pathologic examination of the surgical specimen demonstrated a cystic mass within the pancreas. The mass had a well-defined capsule within which was splenic parenchyma and a small cyst lined by a layer of benign squamous epithelium. Pathologic diagnosis was consistent with an epidermoid cyst in an intrapancreatic accessory spleen (IPAS) (● Fig. 4).

None of the 16 reported IPAS cases were diagnosed preoperatively as they are known to be difficult to clinically distinguish from other tumors. The value of EUS-FNA for their diagnosis needs further study. FNA was not done in the current case because the lesion was presumed to



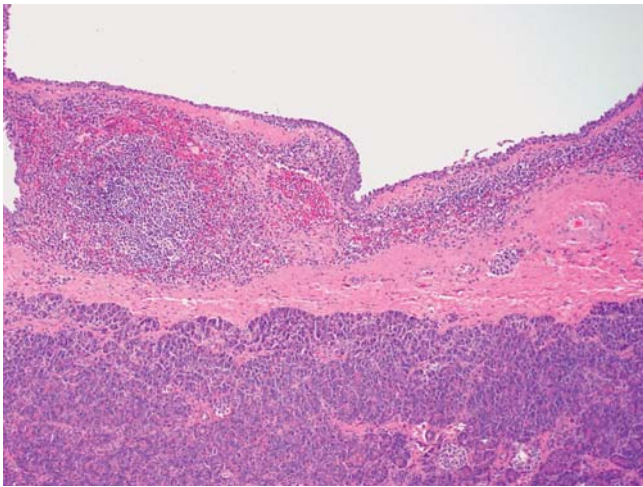
**Fig. 1** Endoscopic ultrasound showing a hypochoic, round, and well-circumscribed mass in the tail of the pancreas.



**Fig. 2** Endoscopic ultrasound elastography showing inhomogeneous hardness (blue = significant hardness; green = intermediate hardness).



**Fig. 3** Endoscopic ultrasound tattooing: injection of purified carbon particle just proximal to the mass as the needle is withdrawn to the surface of the pancreas.



**Fig. 4** Epidermoid cyst in an intrapancreatic accessory spleen. Note the thin epithelial lining (top), the layer of splenic tissue, and the associated pancreatic parenchyma (bottom).

represent a PNET according to outside pathologic diagnosis.

Elastography is a means of measuring tissue stiffness. Malignant tissue is harder than benign tissue and elastography may be able to differentiate between them [2]. The system is set up to use a hue color map (red-green-blue), in which hard tissue areas are shown in dark blue, medium-hard tissue areas in cyan, intermediate hardness tissue areas in green, medium-soft tissue areas in yellow, and soft tissue areas in red [3]. In the current case, the epidermoid cyst demonstrated inhomogeneous hardness (mixture of blue and green). EUS-elastography has been used for the diagnosis of pancreatic cancer and malignant lymphadenopathy with variable sensitivity, specificity, and accuracy in different studies [3–5].

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**Competing interests:** None

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