Endoscopic Snapshot

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Elastography and Contrast-Enhanced Endoscopic Ultrasound Findings in a Pseudo-Solid Variant of a Pancreatic Serous Cystadenoma

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Keywords
Endoscopic ultrasonography · Elastography · Contrast-enhanced endoscopic ultrasonography · Pancreatic cysts · Serous cystadenoma

Achados em Ecoendoscopia com Elastografia e Contraste na Variante Pseudo-Sólida do Cistadenoma Seroso do Pâncreas

Palavras Chave
Ecoendoscopia · Elastografia · Ecoendoscopia com contraste · Lesões quísticas do pâncreas · Cistadenoma seroso

An 80-year-old female was referred to the Gastroenterology Department due to a 40-mm solid mass in the pancreatic isthmus, incidentally found on a computed tomography (CT) scan. Her past medical history was significant for hypertension and coronary artery disease. Magnetic resonance cholangiopancreatography (MRCP), performed 4 months after the CT, showed a 45-mm hypervascular mass in the pancreatic isthmus, with intermediate-high signal intensity on T2-weighted images, suggesting a complex solid microcystic lesion (Fig. 1).

Endoscopic ultrasound (EUS) showed a well-circumscribed, 45-mm, predominantly hypoechogenic complex mass in the pancreatic isthmus, with scattered cystic areas. EUS-guided fine-needle aspiration with a 25-gauge needle was performed (3 passes) and cytology was suspicious, although not definitive, for malignancy. In a multidisciplinary team meeting, surveillance was decided based on MRCP/EUS morphologic findings, compatible with a pseudo-solid variant of a serous cystadenoma (SCA) and equivocal findings for malignancy on cytology, besides the location of the lesion (pancreatic isthmus) and the patient's age and comorbidities. EUS was repeated 12 months later, with stable morphologic findings. Additional evaluation with Doppler-EUS showed increased color-Doppler signal (Fig. 2a), real-time elastography presented a soft pattern (strain ratio 3.1) (Fig. 2b) and, in the dynamic study with contrast (Sonovue®), the pseudo-solid areas presented intense enhancement with slow washout (Fig. 2c). No suspicious lymph nodes were found.

The differential diagnosis of complex pancreatic lesions is often challenging, and EUS morphology alone cannot provide a diagnosis in the majority of cases. EUS-

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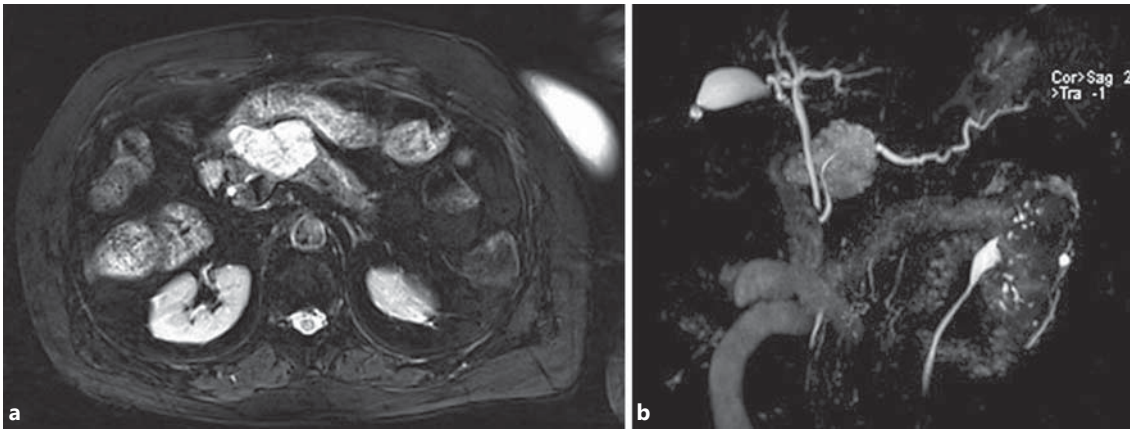

Fig. 1. Magnetic resonance cholangiopancreatography (MRCP): 45-mm hypervascular moderately hyperintense mass in the pancreatic isthmus, with intermediate-high signal intensity on T2-weighted imaging, suggesting a complex solid microcystic lesion (**a**, axial T2-weighted imaging; **b**, MRCP).

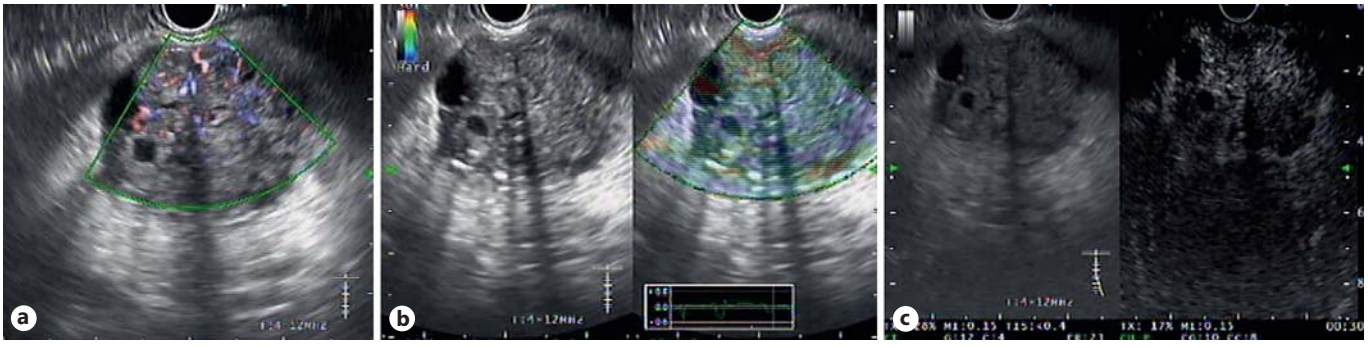

Fig. 2. Endoscopic ultrasound: 45-mm hypoechogenic pseudo-solid lesion, with an intense Doppler signal (**a**), a soft (predominantly green) pattern on elastography (**b**), and an intense enhancement with late washout in the dynamic study with contrast (**c**).

guided fine-needle aspiration, EUS real-time elastography (EUS-E), and contrast-enhanced EUS (CE-EUS) can add valuable information and prevent unnecessary surgeries. Serous cystic neoplasms comprise 1–2% of pancreatic neoplasms and 10–15% of pancreatic cystic lesions [1]. SCA can be classified into 4 morphologic patterns: microcystic (which comprises more than half of the cases), macrocystic (30%), mixed (11%), and solid, resulting from the coalescence of multiple 1- to 2-mm cysts (7%) [2]. SCA has a very low risk of malignant transformation: size >10 cm and head location are independently associated with aggressive behaviour [3]. Thus, in patients with suspected SCA, surgical resection should be considered (1) when differentiation from other neoplasms cannot be assured; (2) the patient is symptomatic; and (3) when the tumor is rapidly increasing in size (with no defined cut-off value, taking into account that reported growth rates for SCA range from 1 to 6 mm/year) [2–5]. The differential diagnosis between the solid variant of SCA and other solid pancreatic neoplasms, including adenocarcinoma and neuroendocrine tumors, is crucial. Both pancreatic adenocarcinoma and neuroendocrine tumors typically present a hard pattern on EUS-E, whilst neuroendocrine tumors are typically hyperenhanced lesions with rapid washout on CE-EUS and adenocarcinoma is typically a hypoenhanced mass [6, 7]. On CE-EUS, SCA has hyperenhancement in 86% of the cases, with slow washout in 78% [8]. The pseudo-solid variant of SCA is a rare lesion, and this case emphasizes the relevance of EUS-E and CE-EUS in the differential diagnosis of this challenging pancreatic lesion.

Statement of Ethics

This study did not require informed consent or review/approval by the appropriate ethics committee.

Disclosure Statement

The authors have no conflicts of interest to declare.

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