Gastroenterology and Hepatology From Bed to Bench.

CASE PRESENTATION

Not every pancreatic mass is cancer: a case of a large intra-pancreatic splenule

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ABSTRACT

We report a case of a 72-year-old man who was referred to our tertiary medical center for endoscopic ultrasound (EUS) evaluation for an incidental 2-cm mass in the tail of the pancreas seen on computed tomography (CT). On EUS, a 22 mm by 13 mm, well-defined hypoechoic mass was identified within the pancreatic tail, and a fine-needle biopsy was performed. Histopathology revealed benign pancreatic parenchyma and the presence of lymphocytes. A technetium-99m sulfur colloid scan was performed, which demonstrated uptake in the pancreatic tail lesion consistent with an intra-pancreatic splenule. This case demonstrates that a splenule or accessory splenic tissue should remain in the differential diagnosis of a pancreatic mass. An accurate diagnosis of pancreatic splenule can preclude surgical resection.

Keywords: Pancreatic splenule, Pancreatic mass, Endoscopic ultrasound, Fine needle aspiration

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Introduction

As the use of abdominal imaging, including computed tomography (CT), abdominal ultrasound (US), and magnetic resonance imaging, has increased, there has been a concomitant increase in the number of asymptomatic lesions in the pancreas. Accessory splenic tissue or pancreatic splenule remains a differential diagnosis in evaluating pancreatic masses. With an accurate diagnosis of accessory splenic tissue, patients can avoid surgical resection and accessory workup general undergone by a patient with pancreatic malignancy.

Case Presentation

A 72-year-old man was referred for endoscopic ultrasound (EUS) evaluation for an incidental 2-cm mass in the tail of the pancreas seen on computed tomography (CT) scan at an outside hospital. On EUS, a 22 mm by 13 mm, well-defined hypoechoic mass was identified within the pancreatic tail, and a fine-needle biopsy was performed (Figure 1A). Histopathology revealed benign pancreatic parenchyma and the presence of lymphocytes (Figure 1B). Testing for IgG4 was negative. Given that the EUS appearance was suspicious for a neuroendocrine tumor, the case was discussed at a multidisciplinary conference. Subsequently, the decision was made to obtain a technetium-99m sulfur colloid scan, which demonstrated uptake in the pancreatic tail lesion consistent with an intra-pancreatic splenule (Figure 1C). A technetium-99m sulfur colloid scan can confirm the presence of a splenule, when there is clinical suspicion.

Discussion

Pancreatic splenule (PS) or accessory spleen is a benign congenital anomaly in which there is a failure of

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fusion of the main body of the spleen and splenic tissue during embryogenesis (1).

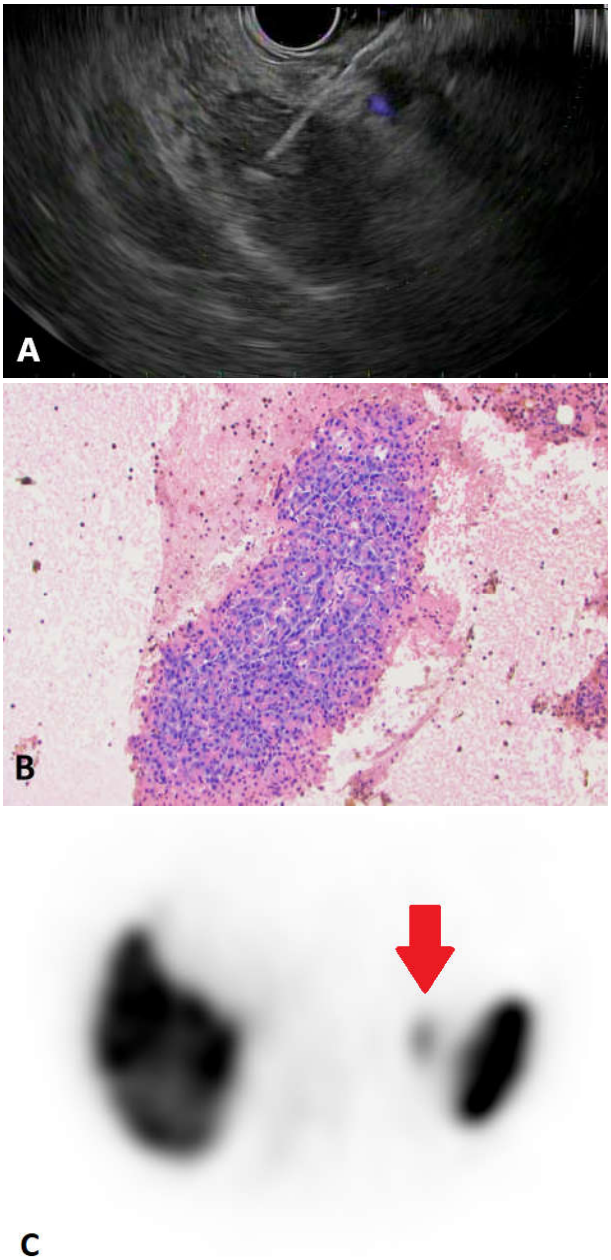

Figure 1. A. EUS image demonstrating a hypoechoic pancreatic tail mass with fine needle biopsy. B: Hematoxylin and eosin stain (H&E) with 10x magnification demonstrating benign pancreatic parenchyma with abundance of lymphocytes which are characteristic of PS. C. Technetium-99m sulfur colloid scan, with uptake of isotope in the pancreatic tail lesion consistent with an intra-pancreatic splenule.

The prevalence of accessory splenic tissue ranges from 10-to 30% (2, 3). PS is usually asymptomatic and diagnosed incidentally when abdominal imaging is performed. The pancreatic tail is the second most common location of pancreatic splenule. Given the high density and enhancement of PS, accessory spleens in the pancreatic tail can be mistaken for a primary pancreatic mass including a neuroendocrine tumor (4). Intra-pancreatic splenules are usually smaller in size (less than 1 cm) but can also be larger as was the case in our patient. EUS features of PS include a round- to oval-shaped, small lesion usually less than 2 cm in diameter and having well-defined margins with a homogeneous echotexture. The echogenicity is lower than that of the adjacent pancreas and identical to that of the spleen. On Doppler mode, the EUS findings of PS may demonstrate increased vascularity (2, 5).

Newer imaging modalities have improved the diagnostic accuracy of PS; however, there is a portion of patients who still undergo unwarranted surgical resection (6, 7). EUS-guided, fine-needle aspiration is a safe technique to obtain the diagnosis of PS. Cytologic features of the splenic tissue are characterized by small lymphocytes with a mixed inflammatory infiltrate with thin-walled blood vessels, which represent splenic sinuses (2). Specialized stains for chromogranin and cytokeratin can distinguish NET from PS. Nuclear imaging can be useful in confirming the diagnosis of PS. Technitium-99m labeled colloid is taken up by the reticuloendothelial system after intravenous injection and is thus taken up by the liver, spleen, and bone marrow. In summary, it is important to recognize PS in the differential diagnosis of pancreatic mass. Endosonographers need to recognize the EUS appearance of an intra-pancreatic splenule and use FNA and immunohistochemical analysis to rule out alternative etiologies of a pancreatic mass. An accurate diagnosis of PS can preclude surgical resection.

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Conflict of interests

None of the authors have any conflicts of interest related to this manuscript to disclose.

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