Endoscopic Ultrasound

OPEN

First case report of pancreatic angiomyolipoma diagnosed by EUS-guided fine-needle biopsy

Francisco Vara-Luiz[1,2,*], Marta Patita[1], Pedro Pinto-Marques[1,3], Ivo Mendes[1], Ana Ramos Canastra[4]

A 37-year-old female with unremarkable history underwent routine abdominal ultrasound, which revealed a heterogenous pancreatic mass. Further evaluation with computed tomography and magnetic resonance imaging showed a 28 × 26-mm slightly hypodense/hypointense, hypovascular nodule in the pancreatic head [Figure 1]. Laboratory examination was within the normal range, including carbohydrate antigen 19-9 (CA19-9)/carcinoembryonic antigen (CEA). The EUS revealed a 33 × 23-mm heterogenous mass in the transition head/istmus, without vascular contact or wirsung dilation [Figure 2]. Quantitative elastography showed strain histogram 89 [Figure 3]. The fine-needle biopsy (FNB) using a 19G needle revealed a mesenchymal neoplasm composed of mature adipose tissue, smooth muscle cells, and thick-walled blood vessels [Figure 4]. Immunohistochemistry for melanocytic (HBM-45) and smooth muscle (desmin) markers were strongly positive, whereas no immunoreactivity was seen with epithelial markers, compatible with pancreatic angiomyolipoma (AML).

AML is a mesenchymal tumor that most commonly affect the kidney. Because bleeding and rupture are known complications of renal AML, the same can be expected from extrarenal tumors. Surgery is the treatment of choice, allowing disease cure.[1,2] To our knowledge, there are only 4 cases in the literature of primary pancreatic AML,[1–4] and this is the first diagnosed by EUS-FNB. We highlight pancreatic angiomyolipoma as a rare entity in the differential diagnosis of a pancreatic mass.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Source of Funding

The authors thank FCT/MCTES for the financial support to CiiEM (UIDB/04585/2020) through national funds.

Conflicts of Interest

The authors have no conflicts of interest to declare.

Data Availability Statement

The complete data of this study are not publicly available due to the patient's privacy but are available from the corresponding author upon reasonable request.

References

1. Zhu QQ, Niu ZF, Yu FD, Wu Y, Wang GB. Epithelioid angiomyolipoma of the pancreas: a case report and review of the literature. *World J Clin Cases* 2021;9(8):1931–1939.
2. Wang X, Xue H, Chang X, Jin Z. Gastrointestinal: epithelioid angiomyolipoma of the pancreas. *J Gastroenterol Hepatol* 2022;37(5):781.
3. Heywood G, Smyrk TC, Donohue JH. Primary angiomyolipoma of the pancreas. *Pancreas* 2004;28(4):443–445.
4. Wang G, Tang H, Xu S, Zhu H, Peng Y, Wang C. Gastrointestinal: primary pancreatic epithelioid angiomyolipoma. *J Gastroenterol Hepatol* 2024;39(3):416.

[1]Gastroenterology Department, Hospital Garcia de Orta, Almada, Portugal; [2]Egas Moniz Center for Interdisciplinary Research (CiiEM), Egas Moniz School of Health and Science, Caparica, Portugal; [3]Gastroenterology Department, Hospital CUF Tejo, Lisboa, Portugal; [4]Pathology Department, Hospital CUF Descobertas, Lisboa, Portugal.

* **Address for correspondence:** Avenida Torrado da Silva, 2805-267 Almada, Portugal. E-mail: franciscovaraluiz@gmail.com (F. V. Luiz).

Endoscopic Ultrasound (2024) 13:4

Received: 28 January 2024; **Accepted**: 18 April 2024.

Published online: 16 July 2024

http://dx.doi.org/10.1097/eus.0000000000000065

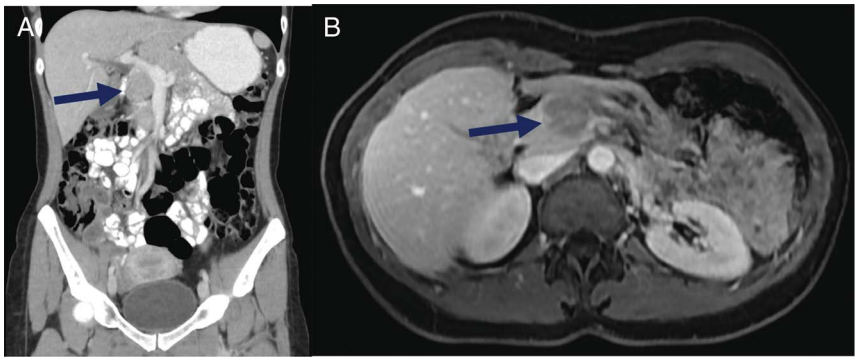

Figure 1. Computed tomography (A)/magnetic resonance (B) showing a hypodense/hypointense hypovascular nodule in the pancreatic head.

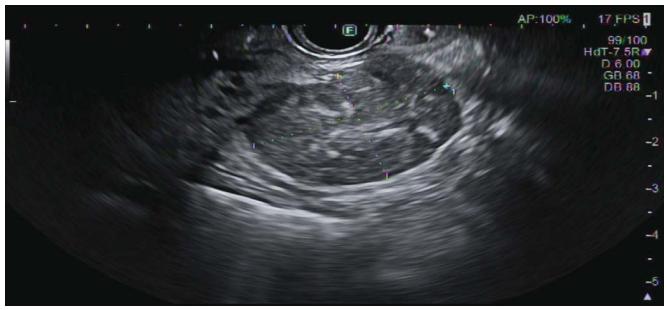

Figure 2. EUS showing a 33 × 23-mm heterogenous mass in the transition head/istmus, without vascular contact or wirsung dilation.

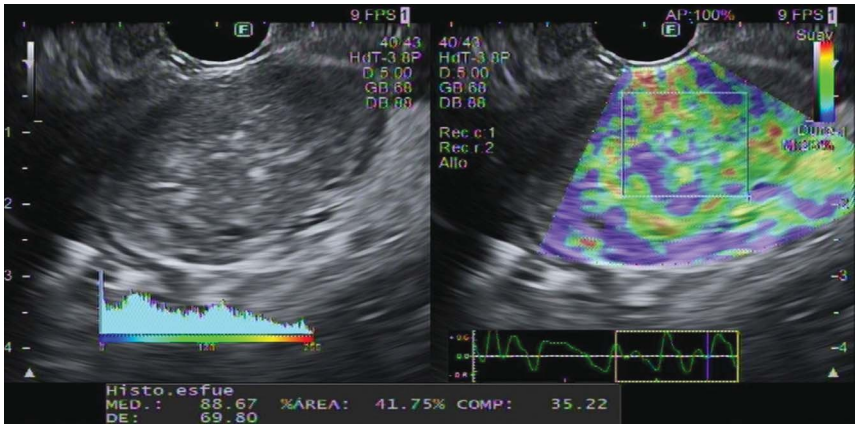

Figure 3. Quantitative elastography evaluation showed strain histogram (SR) 89.

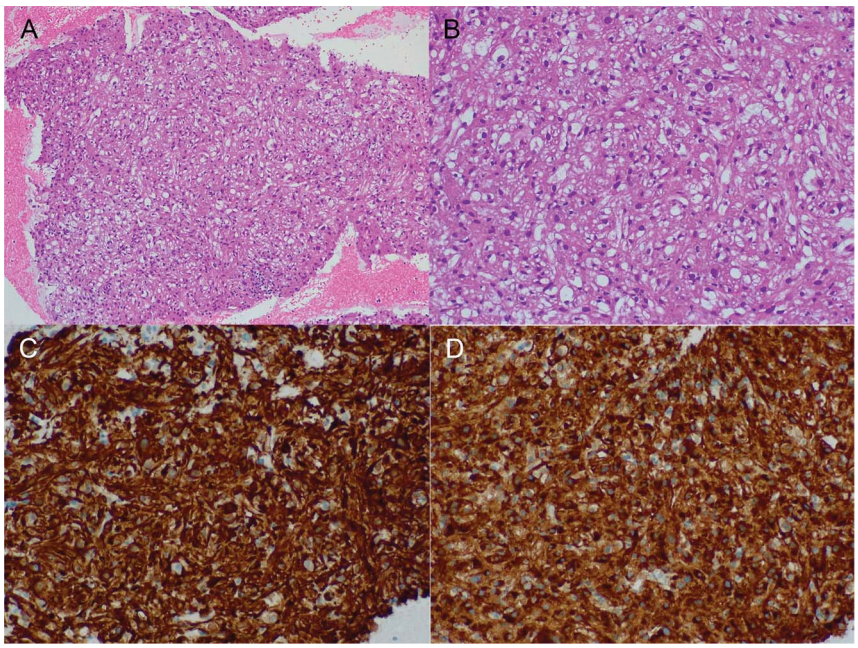

Figure 4. Histopathology examination showing mature adipose tissue, smooth muscle cells and thick-walled blood vessels (A,B). Immunohistochemistry for smooth muscle (C) and melanocytic (D; HBM-45) markers and were compatible with pancreatic angiomyolipoma.