

Case Report

Solid and Pseudopapillary Tumors of the Pancreas: A Case Report and Literature Review

Imade Elazzaoui^{1,3*}; Hakim El Kaoui^{1,3}; Marwa Sabur^{1,3}; Mohamed Lamghari^{1,3}; Mahmoud Dabbagh^{1,3}; Imane Elmessaoudi^{1,3}; Amine Maazouz^{1,3}; Hind Hablajje^{1,3}; Mohammed Najih^{1,3}; Sidi Mohamed Bouchentouf^{1,3}; Moutassir Moujahid^{1,3}; Ahmed Bounaim^{1,3}; Imane Tazi^{2,3}; Amal Damiri^{2,3}

¹Department of Visceral Surgery I, Mohamed V Military Instruction Hospital, Rabat, Morocco

²Department of Pathology, Mohamed V Military Instruction Hospital, Rabat, Morocco

³Mohammed V University, Faculty of Medicine and Pharmacy, Rabat, Morocco

*Corresponding author: Imade Elazzaoui

Department of Visceral Surgery I, Mohamed V Military Instruction Hospital, Rabat, Morocco.

Email: imad.elazzaoui@gmail.com

Received: May 08, 2023

Accepted: June 06, 2023

Published: June 13, 2023

Introduction

Solid Pseudopapillary Tumors (SPTs) of the pancreas or Frantz tumor are rare neoplasms with low malignant potential. They represent less than 2% of pancreatic tumors [1] and occur mainly in young women, often in the second and third decade [2]. We report a new case of solid pseudopapillary tumor of the pancreas in a 39-year-old female patient.

Case Report

A female patient of 39 years old, with no medical history, is consulting for epigastric pain that radiates to the left hypochondrium, associated with vomiting, that has been progressing over several months. Abdominal examination reveals a palpable mass in the epigastric region.

Abdominal ultrasound showed a solid cystic tumor process in the tail of the pancreas measuring 9x8.4cm. Abdominal CT scan (Figure 1) shows the presence of a well-encapsulated formation with dual cystic and tissular components enhanced after injection of contrast measuring 85x86x87mm, repressing the stomach, the splenic vein and the superior mesenteric

Abstract

Solid and Pseudopapillary Tumors (SPT) of the pancreas are a rare entity, occurring essentially in young women, radiological examinations lead to the diagnosis while the positive diagnosis is based on immunohistological study. The primary treatment modality for SPTs condition is surgical intervention.

Our case aims to recall, when encountering a pancreatic mass in a young woman, that it is crucial for surgeons, radiologists, and pathologists to take into account the possibility of solid and pseudopapillary tumor. This is due to the favorable prognosis and unique treatment approaches associated with SPT, as opposed to other types of pancreatic tumors.

Keywords: Solid pseudopapillary tumor; Pancreas; Surgery; Left splenopancreatectomy

vein. MRI (Figure 2) shows large solid cystic mass in the same location, isosignal in T2, hypersignal in diffusion, enhanced after gadolinium injection measuring 90x84x89mm arriving in contact with the spleen and displacing the splenic vein and the splenic artery.

Surgical exploration discovered a tumor of 8cm of large axis at the expense of the posterior face of the tail of the pancreas. A left splenopancreatectomy was performed. The follow-up was uneventful, the patient received a post-splenectomy vaccination protocol before her discharge.

The anatomopathological study showed an encapsulated tumor, half solid, half cystic, with large hemorrhagic foci. Immunohistochemistry was positive for vimentin, progesterone and β -catenin (Figure 5).

Thus, showing a morphological and immunohistochemical aspect consistent with a solid pseudopapillary tumor of the pancreas.

They may present as an abdominal mass or abdominal pain, prompting to perform an imaging (ultrasound, CT scan, MRI).

Surgery is the only curative treatment, and provides long-term survival.

Author Statements

Right to Privacy and Informed Consent

The authors declare that no patient data appear in this article.

Competing Interests

The authors declare that they have no ties of interest in relation to this article

References

1. RCG Martin, DS Klimstra, MF Brennan, KC Conlon. Solid-pseudopapillary tumor of the pancreas: a surgical enigma?. *Ann Surg Oncol*. 2002; 9: 35–40.
2. A Galvin, T Sutherland, AF Little. Part 1: CT characterisation of pancreatic neoplasms: a pictorial essay. *Insights into Imaging*. 2011; 2: 379–388.
3. KM Coleman, MC Doherty, SA Bigler. Solid-Pseudopapillary Tumor of the Pancreas. 2008; 23: 1644–1648.
4. BE Crawford. Solid and papillary epithelial neoplasm of the pancreas, diagnosis by cytology. *South Med J*. 1998; 91: 973–977.
5. C Mao, M Guvendi, DR Domenico, K Kim, NR Thomford, et al. Papillary cystic and solid tumors of the pancreas: a pancreatic embryonic tumor? Studies of three cases and cumulative review of the world's literature. *Surgery*. 1995; 118: 821–828, 1995.
6. T Papavramidis, S Papavramidis. Solid pseudopapillary tumors of the pancreas: review of 718 patients reported in English literature. *J Am Coll Surg*. 2005; 200: 965–972.
7. Y Weerakkody, A Zinaye. Solid pseudopapillary tumor of the pancreas | Radiology Reference Article | Radiopaedia.org. 2023. <https://radiopaedia.org/articles/solid-pseudopapillary-tumour-of-the-pancreas-1?lang=us>.
8. MH Yu, JY Lee, MA Kim, SH Kim, JM Lee, et al. MR imaging features of small solid pseudopapillary tumors: retrospective differentiation from other small solid pancreatic tumors. *AJR Am J Roentgenol*. 2010; 195: 1324–1332.
9. DS Klimstra, BM Wenig, CS Heffess. Solid-pseudopapillary tumor of the pancreas: A typically cystic carcinoma of low malignant potential. *Seminars in Diagnostic Pathology*. 2000; 17: 66–80.
10. D. Santini, "Solid-papillary tumors of the pancreas: histopathology - PubMed", Accessed: Mar. 20, 2023. Available: <https://pubmed.ncbi.nlm.nih.gov/16407635/>
11. M Abid, KB Salah, MA Guirat, H Cheikhrouhou, M Khilif, et al. Tumeurs pseudopapillaires et solides du pancréas: deux observations et revue de la littérature. *Rev Médecine Interne*. 2009; 30: 440–442.
12. D Triguero, A Calero Amaro, I Caravaca Garcia, A Soler Silva, A Sanchis Lopez, et al. Parenchyma-Sparing Resection In A Non-Functioning Neuroendocrine Tumor of The Pancreatic Neck Ep170 Solid Pseudopapillary Neoplasm Of The Pancreas: Two Case Report. *Int Hepato-Pancreato-Biliary Assoc*. 2021; 23: S912.
13. P Michel, P David, E Chatelain, T Anh Nguyen, D Oyeka Ibara, et al. Pseudopapillary tumor of the tail of the pancreas. *J Chir (Paris)*. 2006; 143: 111–112.
14. AL Mulkeen, PS Yoo, C Cha. Less common neoplasms of the pancreas. *World J Gastroenterol*. 2006; 12: 3180-5.