

Solid pseudopapillary neoplasia of the pancreas: incidental finding with increased frequency

Neoplasia sólida pseudopapilar de páncreas: hallazgo incidental cada vez más frecuente

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Abstract

In the context of cystic lesions of the pancreas and their paucisymptomatic symptoms, we present the case of a 33-year-old woman with epigastric pain and nonspecific abdominal discomfort. Computed tomography and magnetic resonance imaging were performed, with the finding of a lesion at the level of the head-uncinate process of the pancreas, compatible with a solid pseudopapillary neoplasm of the pancreas. The procedure was performed with a cephalic pancreaticoduodenectomy of Whipple, without incident. After 18 months of follow-up, the disease remains free. It is worth highlighting the importance of images prior to therapeutic planning, due to the proximity of the tumor to the celiac artery in the hepatic artery's origin.

Keywords: Neoplasia. Pseudopapillary. Pancreas.

Resumen

En el contexto de las lesiones quísticas del páncreas y su clínica paucisintomática, se presenta el caso de una mujer de 33 años que inicia estudio por epigastralgia y molestias abdominales. Se realizan tomografía computarizada y resonancia magnética, con hallazgo de una lesión a nivel de la cabeza-proceso uncinado del páncreas, compatible con una neoplasia pseudopapilar sólida del páncreas. Se interviene realizando duodenopancreatectomía cefálica de Whipple, que transcurre sin incidencias. Tras 18 meses de seguimiento, persiste libre de enfermedad. Cabe destacar la importancia de las imágenes previas a la planificación terapéutica, por la proximidad de la tumoración al tronco celíaco en la salida de la arteria hepática.

Palabras clave: Neoplasia. Pseudopapilar. Páncreas.

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Introduction

This is the case of a 33-year-old woman with nonspecific abdominal pain whose radiologic findings revealed a cystic tumor in the pancreas. Supplementary testing suggests a solid pseudopapillary neoplasm of the pancreas. This type of lesion frequently affects young women, with a typical location in the neck and tail of the pancreas, is considered premalignant, and has a potential for metastasis in up to 15% of cases.^{1,2} Consequently, an accurate differential diagnosis is crucial to plan appropriate treatment. The uniqueness of this case lies in the rare location of the lesion in the head of the pancreas and its proximity to surrounding structures (hepatic artery exiting the celiac trunk and the ampulla of Vater), which required an aggressive surgical approach involving a Whipple cephalic duodenopancreatectomy.

Case report

A 33-year-old woman with no previous past medical history presented with epigastric pain, diarrhea, early satiety, and abdominal distension. Lab test results revealed normal tumor markers. Multiphase contrast-enhanced computed tomography (CT) (Fig. 1) and magnetic resonance imaging (MRI) (Fig. 2) identified a lesion at the head-uncinate process of the pancreas, hypointense on T1 and hyperintense on T2, with a maximum diameter of 92 mm, without biliary tract dilation, distal glandular atrophy, or distant lesions. A solid pseudopapillary neoplasm of the pancreas was suspected. Surgery was performed, revealing a large tumor; enucleation was not performed due to involvement of the duodenal papilla, and a Whipple cephalic duodenopancreatectomy was performed (Fig. 3). Pathological examination confirmed resection with clear margins, without lymphatic, vascular, or perineural invasion. The patient completed the postoperative period without complications and was discharged on day 9. Eighteen months after surgery, she remains disease-free.

Discussion

Distinguishing the clinical and radiological characteristics of pancreatic cystic neoplasms is essential for differential diagnosis, as it can guide us in choosing the optimal therapeutic approach. The incidence of pancreatic cystic neoplasms has increased due to the rise in imaging modalities performed for other reasons, with an estimated prevalence of up to 8% in

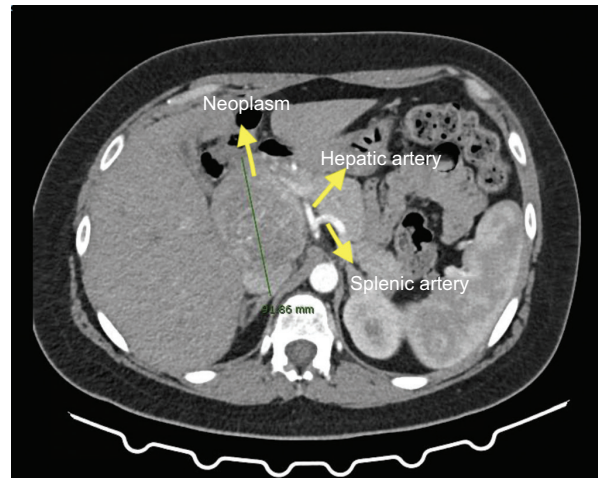


Figure 1. Mass of 92 mm anteroposterior diameter, originating from the pancreatic head, adjacent to the celiac trunk and hepatic artery, surrounding them without infiltration.

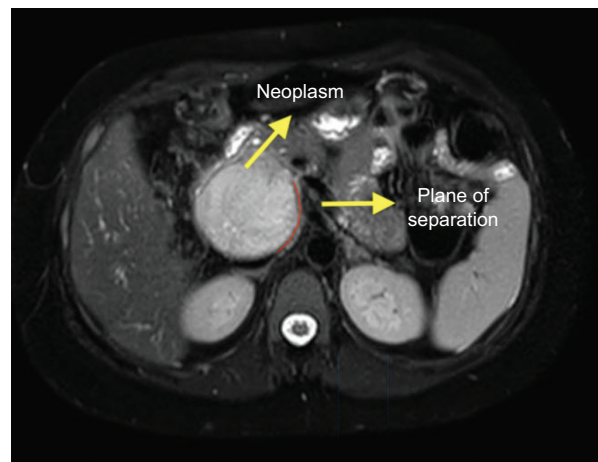


Figure 2. T2-phase magnetic resonance imaging showing a hyperintense mass surrounded by a pseudocapsule, with a separation plane from adjacent structures.

the population.¹ Differential diagnosis can have significant therapeutic implications: history-taking, including assessment of alcohol intake, the presence of cholelithiasis, the history of abdominal trauma, and particularly acute or chronic pancreatitis, are critical factors in suspecting malignancy.^{2,3} Contrast-enhanced CT and MRI with cholangiopancreatography sequences are ideal imaging modalities to evaluate the characteristics of the pancreatic duct, the presence or absence of glandular atrophy, and possible involvement of the biliary tract, as well as to better characterize cystic lesions.⁴ The role of endoscopic ultrasound lies in its superior sensitivity for detecting

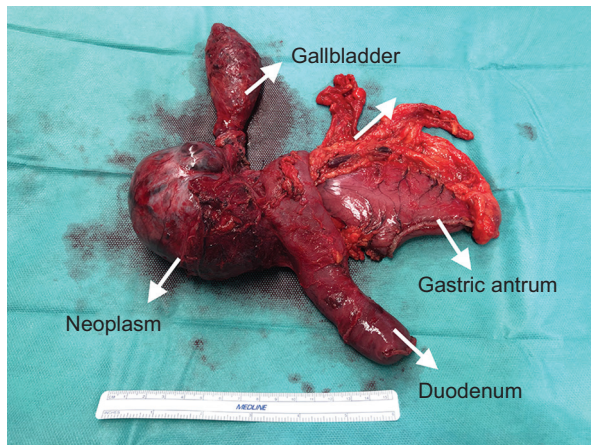


Figure 3. Surgical specimen. Cephalic duodenopancreatectomy.

small periampullary and pancreatic lesions. Additionally, it enables the evaluation of anatomical relationships around the lesion and allows for biopsy sampling for pathological examination and marker analysis, such as carcinoembryonic antigen or amylase.⁵

Solid pseudopapillary neoplasms of the pancreas predominantly affect young women, with an incidence reaching up to 2% in some series. Generally, they are asymptomatic and are detected due to symptoms related to compression of neighboring organs, commonly located in the body-tail of the pancreas.^{6,7} These tumors exhibit typical imaging features on CT and MRI; in MRI T2-phase, they appear as hyperintense masses surrounded by a pseudocapsule.

They show expansive growth but rarely infiltrate, and are considered borderline due to their metastatic potential.⁸ Despite this, the prognosis is very favorable if resected in early stages. Surgical resection is thus recommended once a suspected diagnosis is established, particularly for lesions > 5 cm or near the head and uncinate process of the pancreas.⁹ Poor prognostic factors include perineural invasion, vascular invasion, and the presence of nodal or extrapancreatic metastases, typically in the liver.

Conclusions

The uniqueness of this case lies in the location of the lesion in the pancreatic head and its proximity to

vascular structures and the duodenal papilla, which precluded conservative resection, requiring an aggressive surgical approach to achieve total lesion removal.

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Conflicts of interest

The authors declare no conflicts of interest.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

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