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Pancreatic duodenal stromal tumor presenting as a mass in the head of the pancreas

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Dear Editor,

A 48-year-old woman was incidentally found to have a pancreatic mass during a health examination.In the past, she had been in good physical health. Laboratory investigations including tumor markers and blood glucose were within normal range.CT imaging revealed a 3.6cm × 3.5cm mass in the head of the pancreas with multiple irregular calcifications and cystic lesions within it. The mass is supplied by the

gastroduodenal artery, showing significant heterogeneous enhancement during the arterial phase, predominantly septal, and delayed enhancement during the venous phase. The involvement of the duodenum is unclear.The patient underwent laparoscopic resection, revealing a mass in the head of the pancreas with multiple cystic spaces. Macroscopically, the mass infiltrated the intestinal wall of the duodenum with evidence of necrosis upon sectioning. Pathological examination supported the diagnosis of a CD34 (partially positive) and CD117 (positive) expressing mesenchymal tumor. During a 2-month follow-up, the patient remained asymptomatic with a good quality of life.

DISCUSSION

Gastrointestinal stromal tumor（GIST ）originates from the interstitial cells of cajal (ICCs), GIST is the most common mesenchymal tumor of the gastrointestinal tract.GIST primarily occur in the stomach and small intestine, with rare instances in the pancreas and duodenum (1). Calcification is also infrequently observed (2). Due to the lack of specific features in laboratory tests and imaging findings, preoperative diagnosis of stromal tumors growing in the head of the pancreas and duodenum is challenging. Currently, definitive diagnosis relies on histopathology and positive immunohistochemical staining for CD117 and CD34(3). Given their high malignant potential, surgical intervention is the mainstay of treatment for most patients (4).

In our case, the tumor exhibited cystic degeneration and calcification, resembling characteristics of cystadenoma and neuroendocrine tumors, which can easily lead to misdiagnosis. Additionally, its cystic and solid components make it difficult to distinguish from pancreatic fibromatosis, potentially resulting in overtreatment（R1 ）(5).Therefore, clinicians may consider GIST when encountering pancreatic head masses with cystic changes, particularly in patients with no significant changes in tumor markers or relevant medical history, to enhance diagnostic accuracy and patient survival rates.

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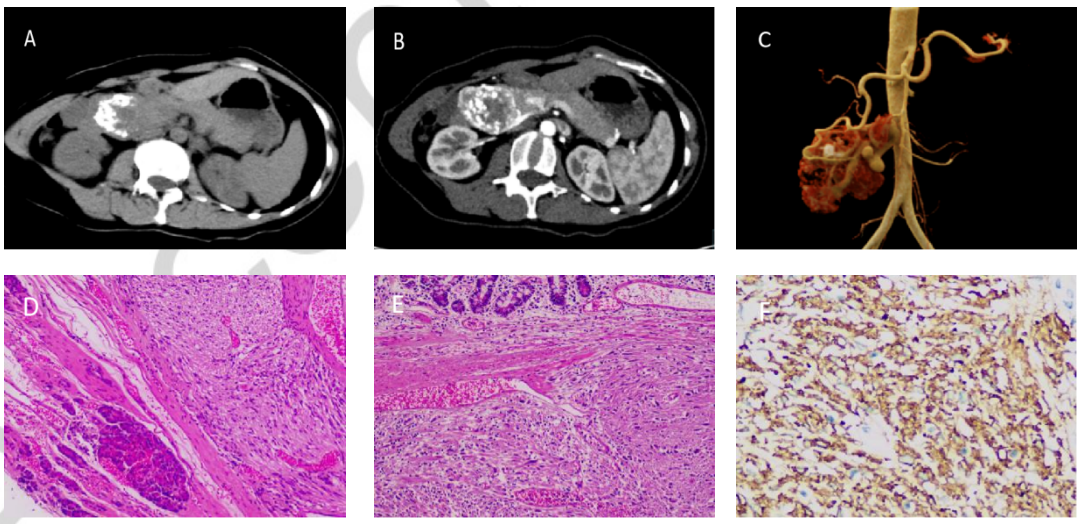

Fig. 1.48-year-old female with stromal tumor of the head of the pancreas and duodenum.A.CT plain scan B. CT-enhanced arterial phase C.Image of the Relationshipbetween the Mass and Blood Vessels D、E.Microscopic examination

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revealed that the tumor was composed of spindle-shaped cells (HE, X10). D.Fragments of pancreatic tissue and the mass.E.Fragments of duodenal tissue and the mass.F.Tumor fragment, cytoplasmic reactivity for CD117. (immunohistochemistry, X40).