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Case Report

The tale of 2 pancreases: Jejunal mesenteric ectopic pancreas causing recurrent ectopic pancreatitis ☆

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ABSTRACT

Ectopic pancreas, or the presence of pancreatic tissue separate from the anatomic pancreas, is rarely reported in locations other than the stomach or duodenum. A 43-year-old female was found to have a large jejunal mesenteric ectopic pancreas causing ectopic pancreatitis during workup for frequent episodes of abdominal pain. We present the imaging findings and postresection pathology findings of a rare jejunal ectopic pancreas and discuss the potential complications of this unique condition.

Introduction

Ectopic pancreas (EP) is a pancreatic parenchyma located separately from the orthotopic pancreas and without anatomic communication to the normal pancreas [1]. EP is most commonly found as a submucosal mass in the wall of the stomach, duodenum, or proximal jejunum but can occur elsewhere [2]. Mesenteric location of EP is quite rare with knowledge limited to a few case reports [3–5]. While most cases of EP are asymptomatic, they can present with complications, such as pancreatitis, bowel obstruction, gastrointestinal bleeding, or neoplasia. This case report of jejunal mesenteric ectopic pancreas (MEP) presenting with recurrent ectopic pancreatitis adds to the limited literature on EP, its complications and clinical presentation, its imaging features, and its management.

Case report

A 43-year-old female presented to the emergency department with abdominopelvic pain. Past medical history was significant for frequent episodes of abdominal pain each year,

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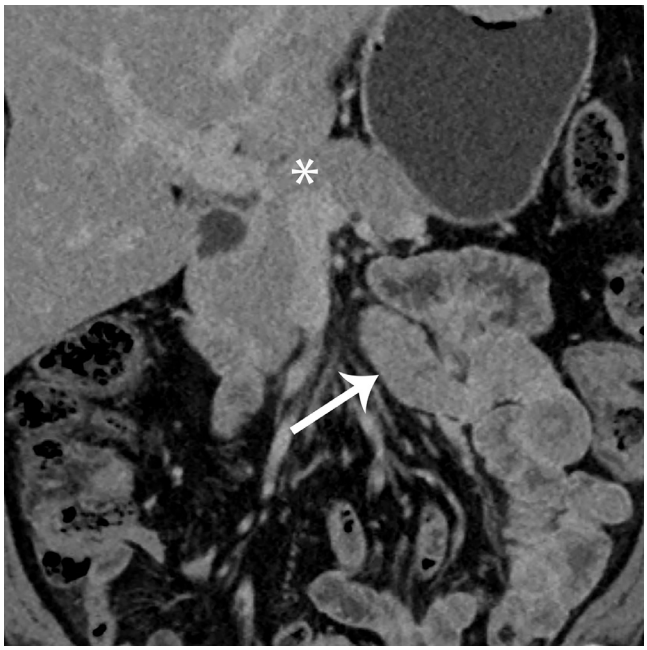

Fig. 1 – Coronal contrast enhanced CT image through the abdomen at 7-minute delay. An elongated mass is seen in the mesentery along the jejunum (arrow) with similar enhancement to the orthotopic pancreas (*).

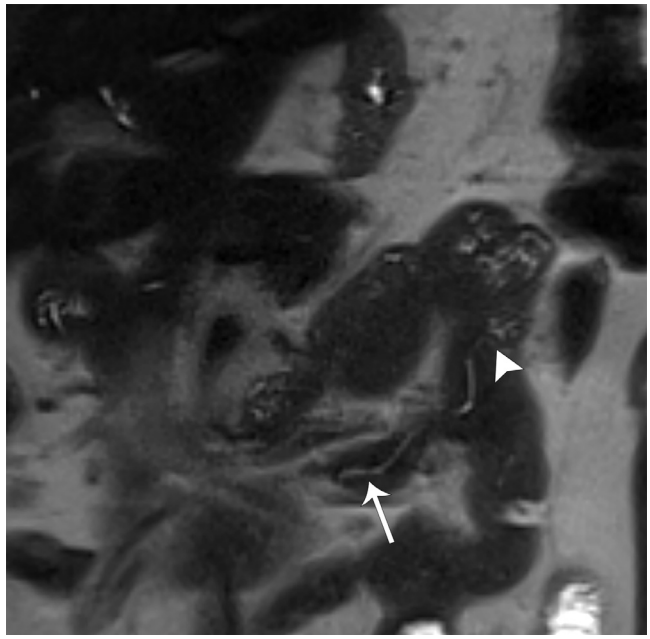

Fig. 2 – Coronal T2 half Fourier single-shot turbo spin echo (HASTE) image showing duct within the MEP (arrow) with connection to the nearby jejunum lumen (arrowhead).

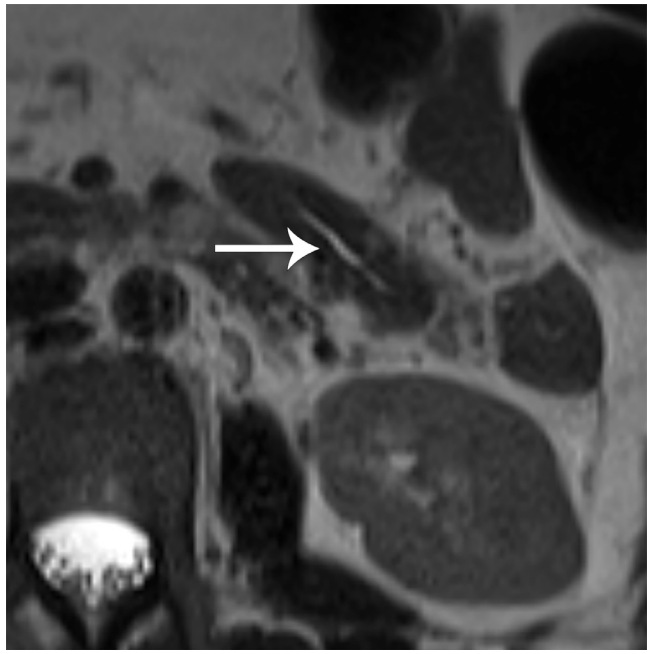

Fig. 3 – Axial T2 HASTE showing elongated MEP with duct (arrow).

lasting up to a week at a time, but no other symptoms. She was previously diagnosed with pancreatitis due to elevated lipase. The patient underwent endoscopy and colonoscopy without abnormal findings.

Contrast-enhanced computed tomography (CT) of the abdomen and pelvis revealed elongated soft tissue density in close proximity to left abdominal jejunal loops (Fig. 1). The tissue enhanced similarly to the normal-appearing orthotopic pancreas. Jejunal MEP was the top differential based on these CT findings.

Magnetic resonance imaging (MRI) of the abdomen with and without contrast and magnetic resonance cholangiopancreatography (MRCP) demonstrated a soft tissue mass measuring 6 cm long by 2 cm wide, with enhancement equal to the orthotopic pancreas (Figs. 2-4). A draining duct was seen emptying into the jejunum, confirming the diagnosis of MEP. There was no evidence of acute inflammation or other complications by imaging.

Due to the frequent episodes of pain, the patient underwent laparoscopic resection of the MEP. Mild edema and pancreatitis of the ectopic pancreas were noted during resection. The entire MEP was dissected from the jejunal mesentery, and a short segment of the jejunum continuous with the MEP was included in the resection. The tissue was sent to pathology, which confirmed the presence of benign pancreatic parenchyma (Figs. 5 and 6). The MEP did not have any histopathologic evidence of chronic pancreatitis or inflammation. Similarly, the portion of the jejunum appeared normal. The patient did well postoperatively.

Discussion

EP is pancreatic parenchyma separate from the normal pancreas and without anatomic or vascular communication with the normal pancreas [1]. The exact origin of EP is unknown, but some theories include migration of persistent duodenal

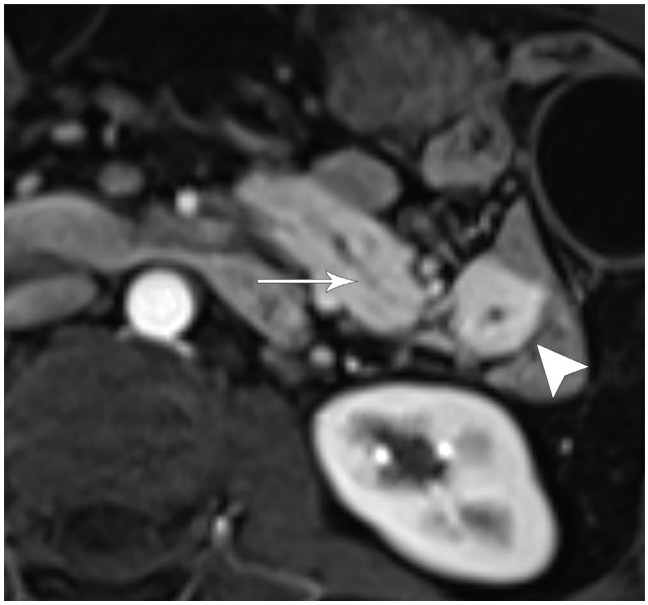

Fig. 4 – Axial T1 fat saturated postcontrast image showing homogenous enhancement of the MEP (arrow) with attachment to the jejunum (arrowhead).

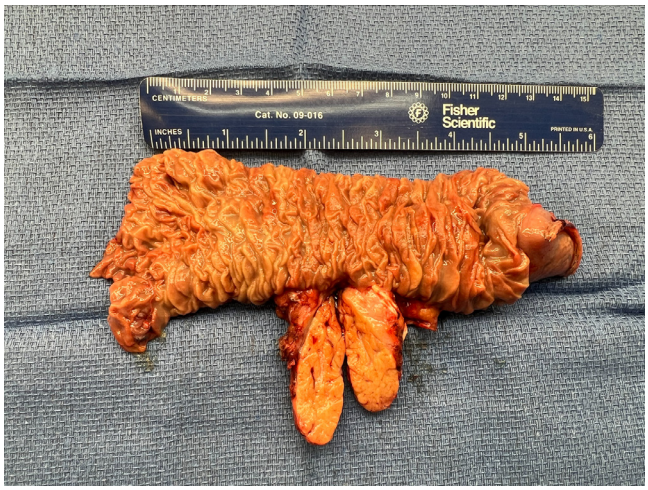

Fig. 5 – Gross photo of the resected MEP and portion of adjacent jejunum.

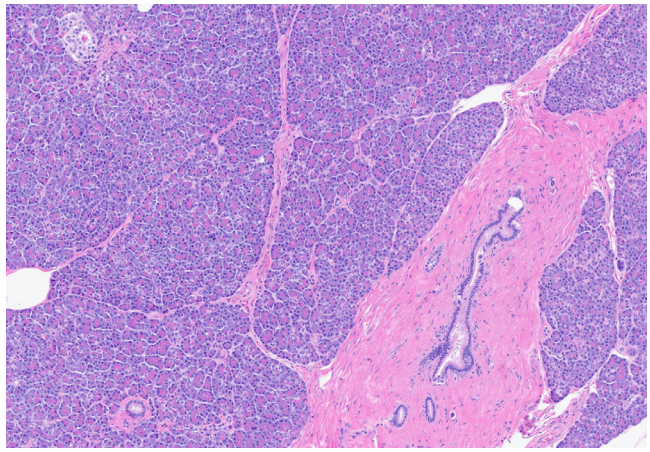

Fig. 6 – Histopathologic evaluation of resected specimen showing type 1 heterotopic pancreas findings (acini, islet cells, ducts) [H&E slide, 10X magnification].

evagination as well as pancreatic metaplasia of endodermal tissue [6].

EP is often incidental and asymptomatic but can sometimes present with complications. Depending on location, EP can cause obstructions, such as the duodenum, resulting in early satiety and vomiting [7]. Intussusception and gastrointestinal bleeding can also occur due to EP. Pancreatitis is another rare but known complication of EP [8,9]. The risk of malignant transformation of EP ranges from 0.7% to 1.8% [9].

Diagnosis can be difficult unless there is high clinical suspicion, as some are too small to delineate on imaging [10]. When submucosal EP can be difficult to distinguish from other gastrointestinal masses, such as gastrointestinal stromal tumor or leiomyoma, assessment of margin circumscription, mass enhancement, and size ratio on imaging may help in differentiation. Kim et al. evaluated the CT imaging findings of EP and found that prominent enhancement, ill-defined margins, endoluminal growth pattern, and a ratio of length and width greater than 1.4 were sensitive for distinguishing submucosal EP [11]. On MRI, EP is isointense to the pancreas on all sequences [12] and characteristically high in T1 signal intensity [3]. MRCP is particularly helpful in distinguishing EP from other entities, as it allows for easier detection of a pancreatic duct within the mass when present [13]. MEP differs in appearance from submucosal EP, as the majority of the mass in MEP is extraluminal, is more commonly elongated and more pancreatic in shape, and ductal communication with the bowel lumen is more often visible [5]. In comparison with submucosal EP, MEP has a more elongated body with a greater ratio of the long axis to short axis with a mean of around 3.0 [14].

Four histologic types of EP have been described [1]. Type 1 heterotopia is comprised of all normal pancreatic parenchyma, while the other types have limited pancreatic elements. Type 2 (canalicular variety) contains only pancreatic ducts. Type 3 (exocrine pancreas) has only acinar tissue, while type 4 (endocrine pancreas) has only islet cells. Type 1 is most often associated with malignancy [9]. Increased size of the EP also increases risk of malignant transformation, with malignancy more common in EP measuring more than 4 cm. Due to the risk of malignancy, as well as symptomatic management, resection of EP is often considered [2].

This report describes a rare case of a large jejunal MEP complicated by frequent episodes of pancreatitis and abdominal pain with pathologic correlation. The case highlights the importance of diagnosing this entity by imaging to help guide patient management, both for symptomatic relief and for malignancy risk reduction. Clinicians and radiologists should consider EP, especially in patients with an abdominal mass on imaging and corresponding abdominal complaints, for appropriate and timely management.

Patient consent

Written, informed consent was obtained from the patient whose case was included in this report.

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