

Gastric Ectopic Pancreas - A Case Report

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Abstract

The ectopic pancreas is a rare embryological abnormality not in association with others. The stomach and duodenum are the most common organs involved. Symptoms are nonspecific. Patients may complain of dyspepsia, abdominal pain, or intestinal obstruction. Diagnosis can be very challenging due to the rarity of the disease and the absence of specific symptoms and radiological findings. Here we report a case of Heterotopic pancreas in gastric tissue in a 23-year-old woman admitted to the emergency department due to acute upper gastrointestinal symptoms. Endoscopic ultrasonography revealed submucosal gastric lesions. The patient underwent abdominal computed tomography that showed gastric mass originating along the lesser curvature of the stomach. According to the patient's symptoms, family history, and radiological findings, the patient was scheduled for surgical resection. In this case, the ectopic gastric pancreas was found on routine histopathological examination. Clinical presentation of the ectopic pancreas can be challenging, especially in an emergency. Diagnostic-therapeutic laparoscopy should be considered in symptomatic patients.

Keywords: Ectopic Pancreas, Epigastric Pain, Pancreatitis, Gastritis, Endoscopic Ultrasonography.

Introduction

The incidence of the ectopic pancreas is 0.6-13%, according to autoptic findings [1]. In 90 % of the cases, it is found in the submucosal and muscularis propria of the gastrointestinal tract, especially in the stomach and the duodenum [2]. Usually, the disease is asymptomatic, and most cases are detected incidentally [3]. In rare cases, it can present acutely with abdominal pain, vomiting, bowel

obstruction, or thoracic pain [2]. Endoscopic ultrasonography (EUS) is considered the most appropriate diagnostic tool for submucosal gastric lesions. However, it cannot assess the diagnosis with absolute certainty [3]. Accordingly, surgery can be considered for a definitive diagnosis and treatment in symptomatic patients with inconclusive endoscopic and radiological findings.

Case Report

A 23-year-old woman was admitted to the emergency department for repeated episodes of vomiting, dyspepsia, and abdominal pain. She had a family history of gastric cancer. Abdominal examination was unremarkable except for epigastric tenderness; no masses were appreciated. Her blood tests were routine. Her account shows an esophagogastroduodenoscopy (EGD) showed a mucosal bulging and mild antral gastritis (**figure 1a**). For a better investigation, the patient underwent an abdominal computed tomography (CT scan) that showed 22x10x10mm submucosal lesion along the lesser

curvature in the stomach. No adjacent regional lymphadenopathy was noted. According to her symptoms, her personal history, and the radiological findings, surgical resection was performed. At surgery, a mass was identified in the proximal body with overlying mucosa measuring 4.5x2.3x1.3cm without serosal invasion. The specimen was sent for histopathological examination. Her all-baseline profile was within normal limits. The postoperative course and follow-up at one month remained uneventful.



Figure 1A: Endoscopic image. Esophagogastroduodenoscopy revealed a submucosal bulge with a diameter of approximately 22x10x10mm in the lesser curvature of the gastric wall.

Pathologic Findings

A gross examination of the resected gastric specimen revealed tissue structure with overlying mucosa measuring 4.5x2.3x1.3cm. The cut section of the tissue structure showed a grey-brown area measuring 2x2x0.7cm.

A microscopic examination from the resected specimen showed gastric mucosa with underlying submucosa, muscularis propria, and

subserosa showing normal pancreatic ducts, acini, and islet cells. There was no evidence of any neoplastic pathology in the submitted biopsy (**Figures 2a and 2b**).

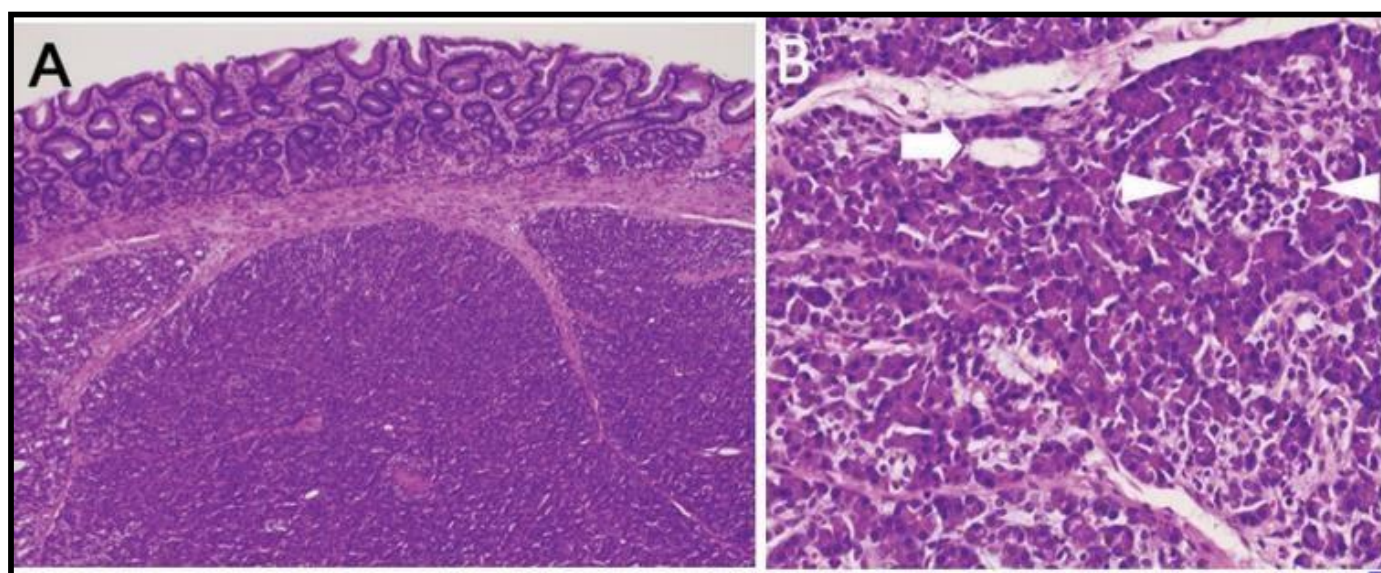


Figure 2: Pathologic images. (a) The lesion was in the submucosal layer (hematoxylin and eosin [H&E] staining, x4.2). (b) Pancreatic tissues composed of acini, ducts (arrow), and islets of Langerhans (arrowheads) were seen in the gastric wall (H&E staining, x20).

Discussion

Pancreatic heterotopia is pancreatic tissue without anatomical or vascular connection to the pancreas. It usually occurs in the upper gastrointestinal tract, mainly in the stomach (30%), duodenum (30-90%), and jejunum (20%), the antrum being the commonest affected gastric site [4,5]. Pathogenesis still needs to be clearly understood. Pancreatic heterotopia may develop during the embryological foregut rotation when fragments of the pancreas migrate into the upper gastrointestinal tract or can result in endodermic metaplasia arising in the submucosal tissue during embryonic life. This second theory explains why ectopic pancreatic cells can be found even in distant anatomical districts like the thoracic cavity [5].

In a recent retrospective study by Betzler et al. 83.5% of patients with duodenal pancreatic heterotopias were asymptomatic, and the

diagnosis was made by gross histology after surgery, which was usually performed for biliary or pancreatic neoplasia. In the study by Park et al., 65% of patients with EUS suspicion of the ectopic gastric pancreas were asymptomatic. Nevertheless, the disease can be symptomatic. Dyspepsia and epigastric pain are the most typical clinical presentations [2,5]. According to the anatomical site, gastrointestinal obstruction, abdominal pain, or thoracic pain may occur. Diagnosis of the disease is not easy. EGD usually shows only a mucosal bulging. A central dumpling, which corresponds to a duct opening, is present in 35-90% of the cases, but similar findings can occur in the case of submucosal gastrointestinal stromal tumors (GIST) or neuroendocrine tumors (NET) [2,3]. Nowadays, EUS is the preferred examination to evaluate submucosal gastric lesions. The ectopic pancreas means size reported in the literature is about

1.3-1.4cm^{2,3}. In our case, the endoscopic study showed a mucosa bulging. Moreover, the patient was symptomatic, and a CT scan

showed a gastric mass originating along the lesser curvature. Therefore, the patient was scheduled for surgical resection.

Conclusion

Gastric ectopic pancreas clinical presentation is heterogeneous and mimics different pathologies. This way, diagnosis is not easy, especially in an emergency. EUS is the preferred examination for submucosal lesions, but it cannot accurately assess the diagnosis. Hence, a diagnostic-therapeutic laparoscopy can be considered in

symptomatic patients with large-size lesions or findings suspected of malignancy.

Conflict of Interests

The authors declare no conflict of interest regarding the paper's publication.

References

1. DeBord JR, Majarakis JD, Nyhus LM (1981) An unusual case of heterotopic pancreas of the stomach. *Am J Surg.* 41(2): 269-273.
2. Park SH, Kim GH, Park DY, Shin NR, Cheong JH, et al. (2011) Endosonographic findings of gastric ectopic pancreas: a single center experience. *J Gastroenterol Hepatol.* 26(9): 1441-6.
3. Gottschalk U, Dietrich CF, Jenssen C (2018) Ectopic pancreas in the upper gastrointestinal tract: is endosonographic diagnosis reliable? Data from the German Endoscopic Ultrasound Registry and review of the literature. *Endosc Ultrasound.* 7(4): 270-278.
4. Keda M, Kawaguchi Y, Miyata E, Hasegawa R, Kaneko T, et al. (2017) Endoscopic ultrasonography diagnosis of subepithelial lesions. *Dig Endosc.* 29(4): 431-443.
5. Betzler A, Mees ST, Pump J, Schölch S, Zimmermann C, et al. (2017) Clinical impact of duodenal pancreatic heterotopia- Is there a need for surgical treatment? *BMC Surg.* 17(1): 53.
6. Liu X, Wang G, Ge N, Wang S, Guo J, et al. (2013) Endoscopic removal of symptomatic gastric heterotopic pancreas: a report of nine cases. *Surgical Innovation.* 20(6): NP40-6.
7. Chak A (2002) EUS in submucosal tumours. *Gastrointestinal Endoscopy.* 56(4): S43-S48.