

Gastric Ectopic Pancreas - A Case Report

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ABSTRACT

Ectopic pancreas is a rare embryological abnormality apparently not in association with others. 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 a gastric tissue in a 23 year old woman admitted to the emergency department due to acute upper gastro-intestinal 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 patients symptoms, family history and radiological findings, the patient was scheduled for a surgical resection. In this case, gastric ectopic pancreas was found on routine histopathological examination. Clinical presentation of ectopic pancreas can be challenging, especially in an emergency setting. Diagnostic-therapeutic laparoscopy should be considered in symptomatic patients.

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

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INTRODUCTION

The incidence of ectopic pancreas is 0.6-13%, according to autopsic findings¹. In 90% of the cases, it is found in the submucosal and muscularis propria of the gastrointestinal tract, especially in the stomach and the duodenum². Usually, the disease is asymptomatic and the majority of cases are detected incidentally³. In rare cases it can present acutely with abdominal pain, vomiting and/or bowel obstruction or thoracic pain². Endoscopic ultrasonography (EUS) is considered the most appropriate diagnostic tool for submucosal gastric lesions. However, it cannot assess the diagnosis with absolute certainty³. Accordingly, in symptomatic patients with inconclusive endoscopic and radiological findings, surgery can be considered for a definitive diagnosis and, possibly, treatment.

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 normal. According to her personal history, an esophagogastroduodenoscopy (EGD) was performed showing 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 stomach. No adjacent regional lymphadenopathy noted. According to her symptoms, her personal history and the radiological findings, surgical resection was performed. At surgery, a mass was identified in 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. Postoperative course and follow-up at one month remained uneventful.

PATHOLOGIC FINDINGS

Gross examination of the resected gastric specimen revealed tissue structure with overlying mucosa measuring 4.5x2.3x1.3cm. Cut section of the tissue structure showed a grey, brown area measuring 2x2x0.7cm.

A microscopic examination from the resected specimen

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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 (figure 2a and 2b).



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

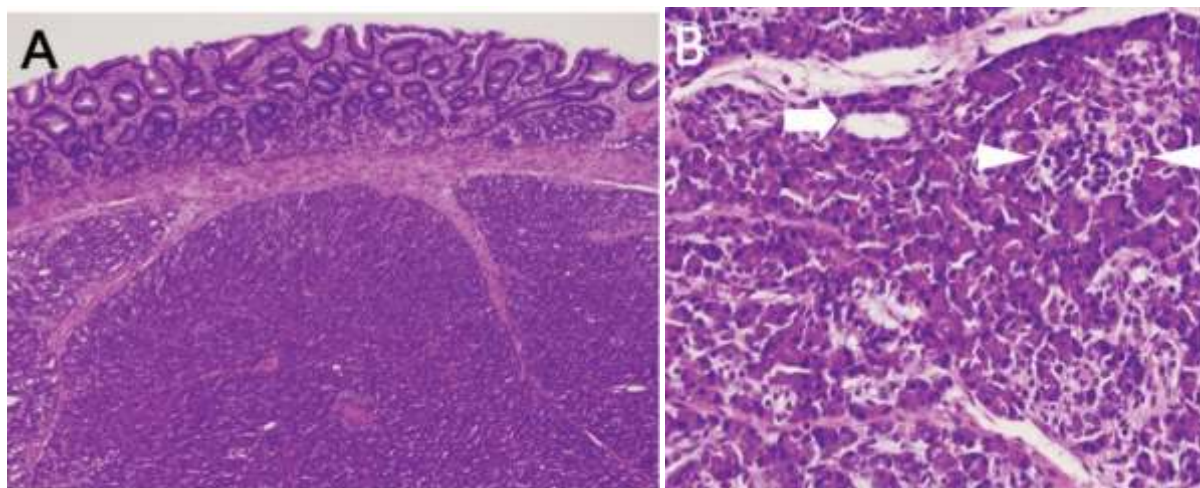


Figure 2. Pathologic images. (a) The lesion was located in the submucosal layer (hematoxylin and eosin [H&E] staining, x4.2). (b) Pancreatic tissues composed of acini, ducts (arrow), and islets of Langerhans (arrowheads) were seen in the gastric wall (H&E staining, x20).

DISCUSSION

Pancreatic heterotopia is defined as pancreatic tissue without anatomical or vascular connection to pancreas. It usually occurs in the upper gastrointestinal tract, mainly in the stomach (30%), duodenum (30-90%) and jejunum (20%), the antrum being the the commonest affected gastric site^{4,5}. Pathogenesis is not clearly understood yet. Pancreatic heterotopia may develop during the embryological foregut rotation, when fragments of pancreas migrate into the upper gastrointestinal tract or can be the result of 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 cavity⁵.

In a recent retrospective study by Betzler et al. 83.5% of patients with duodenal pancreatic heterotopias were asymptomatic, and diagnosis was made by gross histology after surgery, which was usually performed for biliary or pancreatic neoplasia⁵. In the study by Park et al. 65% of

patients with EUS suspicion of gastric ectopic pancreas were asymptomatic². Nevertheless, the disease can be symptomatic. Dyspepsia and epigastric pain are the commonest 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 case of submucosal gastrointestinal stromal tumours (GIST) or neuroendocrine tumours (NET)^{2,3}. Nowadays, EUS is the preferred examination to evaluate submucosal gastric lesions. Ectopic pancreas mean size reported in literature is about 1.3-1.4cm^{2,3}. In our case, the endoscopic examination showed a mucosa bulging. Moreover, the patient was symptomatic and CT scan showed gastric mass originating along the lesser curvature. Therefore, the patient was scheduled for the surgical resection.

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CONCLUSION

Gastric ectopic pancreas clinical presentation is really heterogenous and mimic different pathologies. In this way diagnosis is not easy especially in an emergency setting. EUS is the preferred examination for submucosal lesions but it cannot assess the diagnosis with absolute certainty. Hence, a diagnostic-therapeutic laparoscopy can be considered in symptomatic patients with large size lesions of findings suspected for malignancy.

CONFLICT OF INTERESTS

The authors declare that they have no conflict of interests regarding the publication of the paper.

REFERENCES

- I. An unusual case of heterotopic pancreas of the stomach. DeBord JR, Majarakis JD, Nyhus LM. *Am J Surg.* 1981;141:269-273.
- II. Endosonographic findings of gastric ectopic pancreas: a single center experience. Park SH, Kim GH, Park DY, et al. *J Gastroenterol Hepatol.* 2011;26:1442-1446.
- III. Ectopic pancreas in the upper gastrointestinal tract: is endosonographic diagnosis reliable? Data from the German Endoscopic Ultrasound Registry and review of the literature. Gottschalk U, Dietrich CF, Jansen C. *Endosc Ultrasound.* 2018;7:270-278.
- IV. Endoscopic ultrasonography diagnosis of subepithelial lesions. Keda M, Kawaguchi Y, Miyata E, et al. *Dig Endosc.* 2017;29:431-443.
- V. Clinical impact of duodenal pancreatic heterotopia- Is there a need for surgical treatment? Betzler A, Mees ST, Pump J, et al. *BMC Surg.* 2017;17:53.
- VI. X. Liu, G. Wang, N. Ge et al., "Endoscopic removal of symptomatic gastric heterotopic pancreas: a report of nine cases," *Surgical Innovation*, vol. 20, no. 6, pp. NP40-NP46, 2013.
- VII. Chak, "EUS in submucosal tumours," *Gastrointestinal Endoscopy*, vol. 56, supplement 4, pp. S43-S48, 2002.