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Letter to Editor

Pathology Section

Heterotopic Pancreas in the Stomach Masquerading Neoplasm

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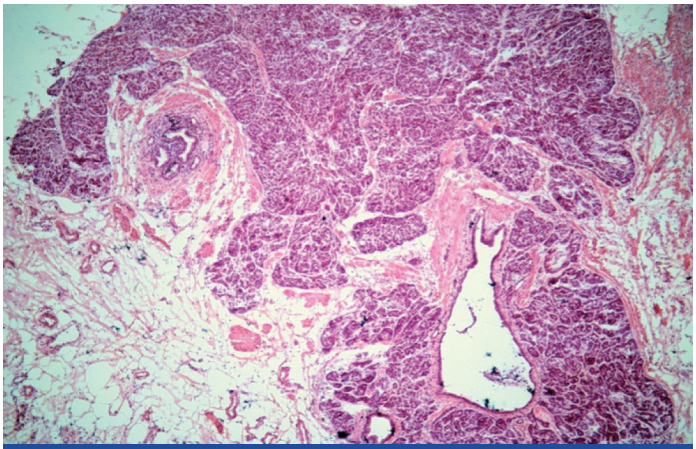
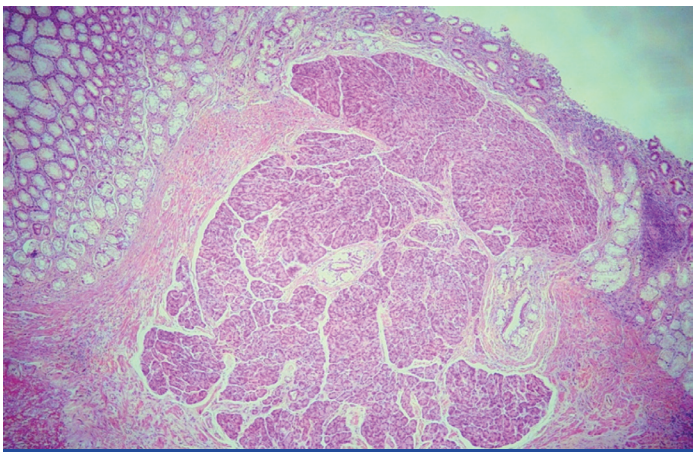
A 36-year-old male was referred to our hospital with a diagnosis of adenocarcinoma stomach on endoscopic biopsy while routinely being evaluated for acid peptic disease. Patient had past episodes of epigastric pain and nausea. The physical examination findings, routine blood tests and abdominal ultrasonography were unremarkable. The tissue blocks and slides were unavailable for review. Therefore, an upper GI endoscopy was performed and a polypoid growth was found with smooth mucosal surface. Endoscopic biopsies showed *H. pylori* induced chronic active gastritis.

The patient was planned for partial gastrectomy based on the previous biopsy report. Frozen section biopsy ruled out malignancy and revealed heterotopic pancreatic tissue [Table/Fig-1]. Histopathologic examination revealed lobules of pancreatic acini and intervening ducts involving the muscularis mucosa and submucosa [Table/Fig-2]. Overlying mucosa showed areas of erosion. The postoperative period was uneventful.



[Table/Fig-1]: Frozen Section tissue showing pancreatic acini and ducts (Rapid H&E, 100X)



[Table/Fig-2]: Histological section showing pancreatic tissue involving submucosa and muscularis mucosa with overlying gastric mucosa (H&E, 100X)

Heterotrophic pancreas is a relatively infrequent entity first described by Jean-schultz in 1729 and confirmed histologically by klobb [1]. It's incidence in autopsy series is 0.5-13.7%. The largest series published is of 212 cases by Dolan et al.,[2].

The most common location is stomach (25.38%) followed by duodenum (17.36%), jejunum (15.21.7%) and rarely, in esophagus, common bile duct, spleen, mesentry, mediastinum and fallopian tube [1]. There are different theories regarding pathogenesis of pancreatic heterotopias. The two most probable proposed hypotheses explaining heterotrophic pancreatic tissue are: 1) buds of separated embryonic pancreatic tissue during rotation of foregut and fusion of dorsal and ventral portion of pancreas subsequently grows independently as islands of pancreatic tissue in the GI tract; 2) an inappropriate pancreatic metaplasia of the endodermal tissue during embryogenesis [3].

Henrich in 1909 first proposed the histological type of pancreatic heterotropia which was modified by Gasper-Fuentes in 1973 [4]. Type I consists of typical pancreatic tissue with acini, duct and islet cells; Type II shows pancreatic duct only; Type III composed of only acinar tissue; Type IV consists of only islet (Endocrine pancreas).

Heterotrophic pancreas is usually asymptomatic. Pain is the most common symptom and other symptoms may arise due to obstructive effect like gastric outlet obstruction and obstructive jaundice. Rare complications include hemorrhage, pancreatitis, intussusceptions, insulinoma, Zollinger-Ellison Syndrome, pancreatic abscess pseudo-pancreatic cyst and malignant transformation in heterotrophic pancreatic tissue [5-7] .

Diagnosis of this entity is always challenging. Differential diagnoses include gastrointestinal stromal tumour (GIST), gastrointestinal autonomic nerve tumour (GANT), carcinoid, lymphoma, and adenocarcinoma [7]. On endoscopy, a broad based umbilicated submucosal lesion noted. Endoscopic ultrasound (EUS) is considered to be a useful diagnostic adjunct in identifying the lesion. Simultaneous EUS and CT scan is a superior modality. Routine endoscopic biopsy may be superficial and can lead to erroneous result. However, jumbo biopsy can be helpful in many cases. Intra-operative frozen biopsy can establish the diagnosis. The symptomatic and doubtful lesions are considered for surgical resection. Intra-operative frozen consultation should be advised to avoid unnecessary radical surgery.

REFERENCES

[1] Christodoulidis G, Zacharoulis D, Barbanis S, Kastogridakis E, Hatzitheofilou K. Heterotrophic pancreas in the stomach: A case report and literature review. *World J Gastroenterol*. 2007;13:6098-100.
[2] Dolan RV, Remine WH, Dockerty MB. *The fate of heterotrophic pancreatic tissue-A study of 212 cases. Arch Surg.* 1974;109:762-65.
[3] Chandan VS, Wang W. Pancreatic heterotopia in the gastric antrum. *Arch Pathol Lab Med.* 2004;128:111–12.
[4] Gaspar Fuentes A, Campos Tarrech JM, Fernandez Burgui JL, Castells Tejon E, Ruiz Rosselo J, Gomez Perez J, et al. Pancreatic ectopias. *Rev Esp Enferm Apar Dig*. 1973;39:255-68.

[5] Papaziogas B, Koutelidakis I, Tsiaousis P, Panagiotopoulou K, Paraskevas G, Argiriadou H, et al . Carcinoma developing in ectopic pancreatic tissue in the stomach: a case report. *Cases Journal.* 2008;1:249.
[6] Liu H, Dixon LR, George TJ.Pancreatic heterotopia masquerading as duodenal carcinoid. *Gastrointest Cancer Res*. 2009;3:118-20.
[7] Trifan A, Târcoveanu E, Danciu M, Huanau C, Cojocariu C, Stanciu C. Gastric heterotrophic pancreas: an unusual case and review of the literature. *J Gastrointestin Liver Dis.* 2012;21:209-12.

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