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Case Report on Pancreatic Heterotopia Mimicking as Gastric GIST

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ABSTRACT
Pancreatic heterotopia, also known as ectopic pancreas, is a rare congenital anomaly characterized by the presence of pancreatic tissue outside its usual anatomical location and without direct connection to the normal pancreas. The clinical presentation of pancreatic heterotopia varies widely, often depending on the ectopic tissue's location, size, and associated complications[1].
In this case report, we describe a 58-year-old male initially suspected to have a gastric gastrointestinal stromal tumours (GIST). However, subsequent investigations led to a revised diagnosis of pancreatic heterotopia.

KEYWORDS: Pancreatic Heterotopia, Gastric GIST

INTRODUCTION

Pancreatic heterotopia, or the presence of pancreatic tissue outside its normal location, can occur both within the abdominal cavity and in areas outside it. Among gastrointestinal lesions, the most common sites for heterotopic pancreas are in the upper gastrointestinal tract. This includes the stomach (30%), duodenum (25%), and jejunum (15%). In rare cases, pancreatic tissue may also be found in association with hepatobiliary structures, such as the liver, gallbladder, common bile duct, or cystic duct.[2].

TYPES	CONTENT
1	Typical pancreatic tissue
2	Pancreatic ducts only
3	Acinic cells only
4	Islet cells only

Table 1 : Gasper Fuentes Modification Of Heinrich Initial Classification for Ectopic Pancreas[3]

CASE REPORT

A 58 year old male patient with past medical history of Systemic hypertension, Type 2 Diabetes mellitus and Dyslipidaemia presented to OPD after incidental finding suggestive of Gastrointestinal Stromal Tumour on CECT, while on treatment for pneumonia at a local hospital.

CECT Abdomen showed an Exophytic enhancing intramural lesion measuring 18.13x18.03 mm is seen arising from greater curvature of the body of stomach-likely GIST . No evidence of necrosis seen in the lesion. He had no associated complaints. He was further evaluated with upper GI endoscopy + tattooing and underwent Partial Gastrectomy. A 2 x 2cm lesion on the greater curvature of stomach was identified and sample taken for histopathology. Postoperatively patient was managed with antibiotics, analgesics and he improved symptomatically. As he became hemodynamically stable, he was discharged on full liquid diet. Biopsy section from the stomach shows intact gastric mucosa with sub mucosa showing extensive oedema and a lesion composed of lobules of pancreatic acini and ducts lying predominantly in the hypertrophied muscularis propria. These were polygonal cells having abundant granular eosinophilic cytoplasm and round nuclei. Few ducts were cystically dilated and lined by columnar cells devoid of nuclear atypia - suggestive of pancreatic heterotopia .

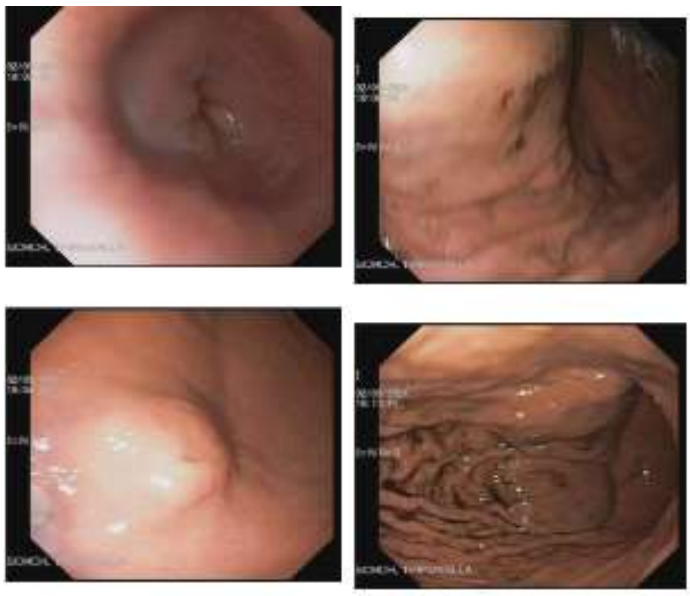

Figure 1: Colonoscopy of the patient showing Gastrointestinal Stromal Tumour

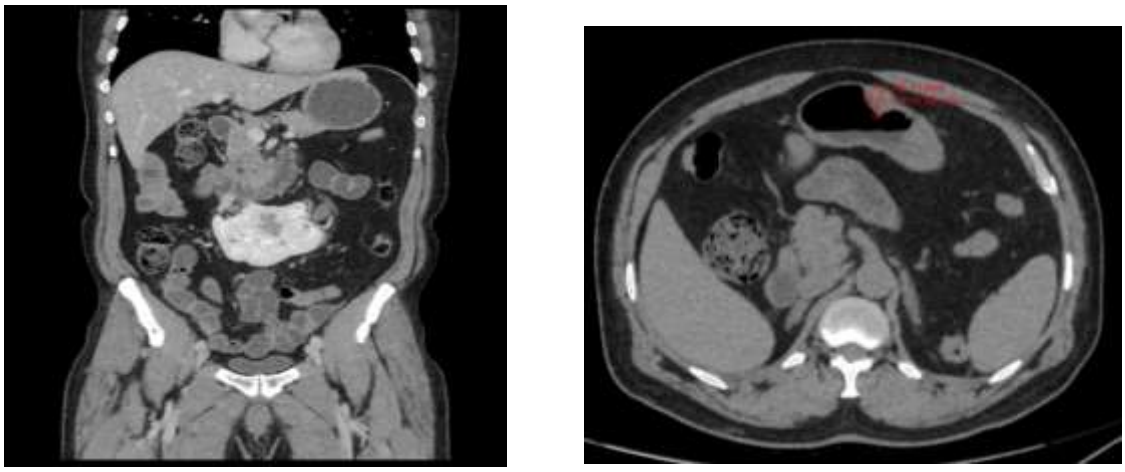

Figure 2 : CECT abdomen of the patient showing Gastrointestinal Stromal Tumour

CONCLUSION

Pancreatic heterotopia is a rare congenital anomaly that can present as a subepithelial gastric mass, often discovered incidentally or during evaluation of nonspecific gastrointestinal symptoms[4]. Its imaging and endoscopic appearance can closely resemble that of gastrointestinal stromal tumors (GISTs), especially when located in the gastric antrum or along the greater curvature, leading to potential misdiagnosis.

This case underscores the importance of including ectopic pancreas in the differential diagnosis of gastric submucosal lesions. Despite advances in imaging modalities such as endoscopic ultrasound (EUS), computed tomography (CT), and magnetic resonance imaging (MRI), preoperative distinction between heterotopic pancreas and Gastrointestinal Stromal Tumour remains challenging due to overlapping radiological features[5,6].

Histopathological examination remains the cornerstone for definitive diagnosis, often requiring surgical excision when non-invasive methods are inconclusive. Awareness of this rare entity is crucial to avoid over-treatment, particularly radical surgical resection for what may ultimately be a benign, non-neoplastic lesion[7].

DISCUSSION

Heterotopic pancreas is a rare developmental anomaly, with a reported incidence ranging from 0.55% to 14% in autopsy studies, observed in approximately one out of every 500 upper gastrointestinal surgical specimens, and in 0.6% to 13% of necropsies[8,9]. Jean-Schultz was the first to describe heterotopic pancreas as pancreatic tissue located outside the normal anatomical boundaries of the pancreas. Macroscopically, this ectopic tissue is most commonly found in the submucosa but can also be present in the muscularis mucosa, subserosa, or serosa. In some cases, it extends through several or even all of these layers.

Patients with heterotopic pancreas can be normal, or present with abdominal pain and distension. In addition, it can manifest clinically in some rare diseases of the pancreas including pancreatitis, islet cell tumor, pancreatic carcinoma, and pancreatic cyst[10].

Most patients with HP are asymptomatic and require no treatment. The lesion is usually discovered incidentally. There was no correlation between the histological type of HP and the presence of symptoms. Asymptomatic heterotopic pancreas is hard to diagnose. The management of asymptomatic, incidentally detected HP remains a debate although some evidence suggested in resection of these asymptomatic cases to prevent future complications[12].

The main differential diagnosis for heterotopic pancreatic tissue includes gastrointestinal stromal tumours, gastrointestinal autonomic nerve tumour, gastric carcinoids, lymphoma or gastric carcinoma which can be misinterpreted on imaging studies or endoscopic examinations[11].

The diagnosis of ectopic pancreas is difficult despite the development of modern diagnostic methods such as computerized tomography, ultrasonography, and endoscopic ultrasonography because they are not very specific in the diagnosis. Therefore it remains a diagnostic challenge[5,6].

In our patient, the lesion was incidentally detected on CECT and was initially suggestive of a Gastrointestinal stromal tumour prompting a Partial Gastrectomy. However the biopsy report identified the lesion as Ectopic Pancreas. Therefore the role of biopsy is crucial in differentiating Gastrointestinal Stromal Tumour and Ectopic Pancreas. Here in this case study, it was through the biopsy report that EP was accurately diagnosed.

REFERENCE

1. Subasinghe D, Sivaganesh S, Perera N, Samarasekera DN., "Gastric fundal heterotopic pancreas mimicking a gastrointestinal stromal tumour (GIST): a case report and a brief review", BMC Res Notes. 2016 Mar 22;9:185. doi: 10.1186/s13104-016-1995-5. PMID: 27005685; PMCID: PMC4804510.
2. Hsia CY, Wu CW, Lui WY., "Heterotopic pancreas: a difficult diagnosis", J Clin Gastroenterol. 1999 Mar;28(2):144-7. doi: 10.1097/00004836-199903000-00012. PMID: 10078823.
3. Baz C, Nudotor R, Buseey I, Stitely K., " Rare finding of ectopic pancreas in a cholecystectomy specimen: case report and literature review", J Surg Case Rep. 2024 Oct 21;2024(10):rjae659. doi: 10.1093/jscr/rjae659. PMID: 39435306; PMCID: PMC11491600.
4. Braga M, Matos AP, Marques PP, Ramalho M., " Gastric ectopic pancreas in magnetic resonance imaging: A review of 2 cases", Radiol Case Rep. 2023 Jan 11;18(3):1181-1185. doi: 10.1016/j.radcr.2022.12.003. PMID: 36660566; PMCID: PMC9842967.
5. Attwell A, Sams S, Fukami N., " Diagnosis of ectopic pancreas by endoscopic ultrasound with fine-needle aspiration", World J Gastroenterol. 2015 Feb 28;21(8):2367-73. doi: 10.3748/wjg.v21.i8.2367. PMID: 25741143; PMCID: PMC4342912.
6. Braga M, Matos AP, Marques PP, Ramalho M., " Gastric ectopic pancreas in magnetic resonance imaging: A review of 2 cases", Radiol Case Rep. 2023 Jan 11;18(3):1181-1185. doi: 10.1016/j.radcr.2022.12.003. PMID: 36660566; PMCID: PMC9842967.
7. Raddaoui E, Al-Sharabi A, Almadi MA., "Cytology findings in pancreatic heterotopia, a potential pitfall for malignancy: a case report and literature review", Saudi J Gastroenterol. 2015 Mar-Apr;21(2):116-8. doi: 10.4103/1319-3767.153841. PMID: 25843199; PMCID: PMC4392572.
8. Pujani M, Khandelwal A, Singh K, Pujani M, Bansal C., " Heterotopic Pancreatic Tissue in Gallbladder: A Report of an Unusual Entity at an Extremely Rare Location", Iran J Pathol. 2025 Spring;20(2):231-234. doi: 10.30699/ijp.2025.2019770.3244. Epub 2025 Mar 10. PMID: 40487249; PMCID: PMC12142016.
9. Subasinghe D, Sivaganesh S, Perera N, Samarasekera DN.," Gastric fundal heterotopic pancreas mimicking a gastrointestinal stromal tumour (GIST): a case report and a brief review", BMC Res Notes. 2016 Mar 22;9:185. doi: 10.1186/s13104-016-1995-5. PMID: 27005685; PMCID: PMC4804510.
10. Yuan Z, Chen J, Zheng Q, Huang XY, Yang Z, Tang J., " Heterotopic pancreas in the gastrointestinal tract" , World J Gastroenterol. 2009 Aug 7;15(29):3701-3. doi: 10.3748/wjg.15.3701. PMID: 19653355; PMCID: PMC2721251.
11. Jiang LX, Xu J, Wang XW, Zhou FR, Gao W, Yu GH, Lv ZC, Zheng HT., " Gastric outlet obstruction caused by heterotopic pancreas: A case report and a quick review",World J Gastroenterol. 2008 Nov 21;14(43):6757-9. doi: 10.3748/wjg.14.6757. PMID: 19034986; PMCID: PMC2773325.
12. Kumar V, Gala D, Gustke C, Shah M, Bandaru P, Gayam VR, Gadaputi V, Reddy M., " Pancreatic Heterotopia at the Gastroesophageal Junction: A Case Report and Review of the Literature", Cureus. 2023 Mar 6;15(3):e35830. doi: 10.7759/cureus.35830. PMID: 37033520; PMCID: PMC10075329.
13. Burch J, Ahmad I., " Gastrointestinal Stromal Tumors." [Updated 2022 Sep 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK554541/