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## Case Report

# Adenoma in Ectopic Pancreas: A Case Report

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## ARTICLE INFO

### Article history:

Received: 11 January, 2021

Accepted: 26 January, 2021

Published: 19 February, 2021

### Keywords:

Adenoma

ectopic pancreas

case report

## ABSTRACT

**Introduction:** The presence of pancreatic tissue that lacks anatomical or vascular communication with the pancreatic organ has a frequency in autopsy studies that ranges between 0.5% and 13.7%. It is most commonly found in the stomach, specifically in the antrum. Treatment is not clearly established. Surgical resection is recommended in symptomatic patients whose only cause of symptoms is ectopic pancreatic tissue or cancerous formations.

**Objective:** Report a case of ectopic pancreatic adenoma given its low incidence.

**Case Report:** This study reports the case of a 45-year-old male with a history of clinical diagnosis of gastroesophageal reflux disease and a Nissen fundoplication. He presented poor evolution 6 months after the surgery. An endoscopy which revealed postpyloric "polyp" at the level of the duodenal bulb and an inconclusive histopathological study of the same were performed. Reassessment with CT showed a tumor in the first portion of the duodenum measured at 2.2cm, without adenopathies, and a normal-appearing pancreas. It has been made a subtotal gastrectomy and Roux "Y" reconstruction, without complications, with good postoperative evolution, discharged at home on the sixth day. With hematoxylin and eosin technique, the histopathology report reported bile duct adenoma originating in ectopic pancreatic tissue, positive immunohistochemistry for cytokeratin 7 (IHC-7), predominantly expressed by ductal epithelial cells of the pancreatobiliary tract. The patient after surgery had a good clinical evolution and disappearance of symptoms.

**Conclusion:** The clinical cases of rare pathologies are presented to increase the world bibliography and to be able to compare the diagnosis and treatment. In this case, a heterotopic pancreatic adenoma was presented, which is a diagnostic challenge.

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## Introduction

Ectopic or heterotopic pancreatic (PE) adenoma was first described by Klob in 1859. It is defined as the presence of pancreatic tissue that lacks anatomical or vascular communication with the pancreatic organ. The

frequency in autopsy studies ranges between 0.5% and 13.7%. It is more common in men aged 30 to 50. It is most commonly found in the stomach, specifically in the antrum (25-38%). It has also been published in the duodenum, jejunum, and less frequently in the esophagus, bile ducts, gallbladder, spleen and mesentery. There are two theories that explain its etiology. The theory of disruption in the embryological origin

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that, by rotating the foregut, some elements of the pancreas separate, and form mature pancreatic tissue at the level of the gastrointestinal tract. And the metaplasia theory details the pancreatic ectopia of the endoderm that migrates to the submucosa during embryogenesis. Its symptoms will depend on the size it presents. Malignant transformation of PE is rare [1-6].

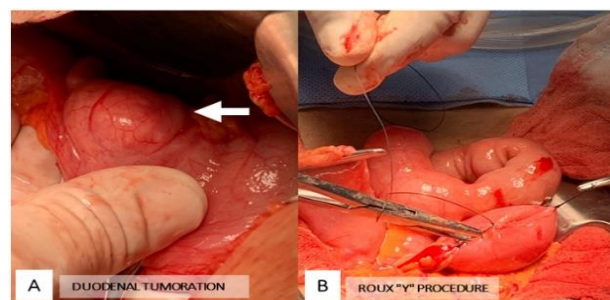
### Case Presentation

45-year-old male, with no chronic degenerative history or oncological genetic burden, with a history of clinical diagnosis of gastroesophageal reflux disease, due to dyspepsia, which subsequently worsened with bloating, postprandial fullness, gastric distention, heartburn, and retrosternal pain, in addition to CT scan (computerized axial tomography) that reported a hiatal hernia, for which he has a surgical history of laparoscopic antireflux surgery and hiatal plasty with Nissen fundoplication. He presented poor evolution 6 months after the surgery, which was manifested with unspecified weight loss, due to the inability to tolerate solid foods, abdominal pain and distention, postprandial gastric fullness, and significant bloating. An upper esophagogastric series reported a filling defect in the first portion of the duodenum, with duodenogastric reflux.

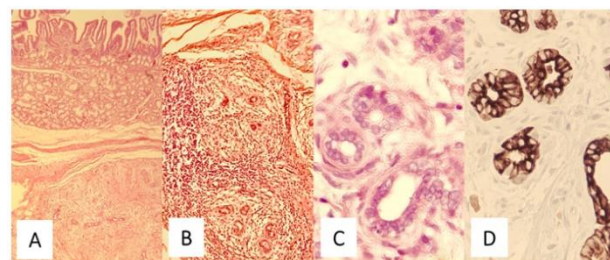


**Figure 1:** The white arrow shows the tumor in the first portion of the duodenum measured at 2.2cm, without adenopathies, and a normal-appearing pancreas.

We re-evaluated the patient with endoscopy who revealed postpyloric “polyp” at the level of the duodenal bulb, an inconclusive histopathological study of the same. Reassessment with CT showed a tumor in the first portion of the duodenum measured at 2.2cm, without adenopathies, and a normal-appearing pancreas (Figure 1). We determined that the signs and symptoms of gastroesophageal reflux that he presented were secondary to a blockage of gastric emptying produced by the postpyloric tumor. Subtotal gastrectomy and Roux “Y” reconstruction were performed (Figure 2), without complications, with good postoperative evolution, discharged at home on the sixth day. With hematoxylin and eosin technique, the histopathology report reported bile duct adenoma originating in ectopic pancreatic tissue, positive immunohistochemistry for cytokeratin 7 (IHC-7), predominantly expressed by ductal epithelial cells of the pancreatobiliary tract. Type II, according to Heinrich's classification, modified by Gaspar and Fuentes for pancreatic ectopia according to histological composition (Figure 3). At outpatient follow-up, the patient is asymptomatic, presenting adequate weight gain.



**Figure 2:** A) The white arrow shows the tumor in the first portion of the duodenum. B) Subtotal gastrectomy and Roux “Y” reconstruction were performed.



**Figure 3:** A) Panoramic view with hematoxylin and eosin staining showing the duodenal mucosa displaced by a lesion under the muscularis of the mucosa. B) 10x image identifies a lesion made up of ducts with uniform diameter and absence of acini fibromuscular stroma, an inflammatory component based on mature lymphocytes and, to a lesser extent, plasma cells. C) Image at 40x, identifying duct lined by simple cubic columnar epithelium with round normochromic nuclei and respected basement membrane. D) 40x image with keratin 7 showing intense positivity in the cytoplasm, it is possible to define a clear separation between the lesion and the duodenal wall, the duct is perfectly drawn.

### Discussion

Heterotopic pancreatic tissue is generally asymptomatic. They are symptomatic when they are greater than 1.5 cm, with abdominal pain, bleeding or obstructive symptoms when the lesion is pre- or post-pyloric. The most common manifestations are abdominal pain, occlusion symptoms or symptoms due to mass effect. The most common site of PE is the stomach, duodenum, and ileum. Its finding is usually fortuitous, when observed in imaging tests or in surgical interventions. Treatment is not clearly established. Surgical resection is recommended in symptomatic patients whose only cause of symptoms is ectopic pancreatic tissue or cancerous formations. Asymptomatic benign lesions do not require surgery. The opinion of the experts is divided as to whether a biannual endoscopic control should be carried out or a medical discharge should be carried out [7-11]. However, it is recommended to perform a resection with free margins, when it is evident intraoperatively, to establish the definitive diagnosis by histological study.

### Conclusion

Ectopic pancreatic tissue is a surgical challenge due to its low frequency, symptoms, and non-specific radiological findings. The definitive diagnosis is by histological study.

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