

# Intrapancreatic Enteric Duplication Cyst Masquerading as Groove Pancreatitis

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## ABSTRACT

Intrapancreatic enteric duplication cysts are exceedingly rare, and the clinical presentation varies. We present a 48-year-old man with significant alcohol and tobacco abuse and a diagnosis of groove pancreatitis complicated by a pancreatic duct stricture, pseudocyst, and recurrent biliary obstruction. Due to failure of endoscopic therapy and concerning findings on endoscopic ultrasound with negative pathology, he underwent a pancreaticoduodenectomy. Pathology revealed an intrapancreatic enteric duplication cyst, minimal chronic pancreatitis changes associated with pancreaticobiliary strictures, and no evidence of malignancy. This rare diagnosis should be considered in the differential for patients with idiopathic recurrent pancreaticobiliary duct strictures and pancreatic pseudomasses.

## INTRODUCTION

Intrapancreatic enteric duplication cysts are exceptionally rare clinical entities that may mimic pancreatic pseudomasses with resultant pancreatic duct strictures, pseudocysts, and recurrent pancreatitis. Enteric duplication cysts are rare congenital malformations often discovered in childhood and less frequently in adults. They can occur in any part of the gastrointestinal (GI) tract, but they are most commonly found in the ileum, esophagus, and colon.<sup>1</sup> The cysts are typically hollow, lined by GI epithelium, surrounded by smooth muscle walls, and found within the GI tract wall or extrinsic to it.<sup>1</sup> Spherical cysts represent 82% of cases and typically do not communicate with the tract lumen, whereas tubular cysts frequently do have such communication with the lumen.<sup>2</sup> Duodenal cysts account for 2–12% of GI duplication cysts, and can cause pancreatitis or biliary obstruction.

## CASE REPORT

A 48-year-old white man presented with a 5-year history of recurrent acute pancreatitis. During the preceding years, he had multiple episodes of pancreatitis complicated by pancreatic duct strictures, associated pseudocysts at the head of the pancreas requiring hospitalization and endoscopic interventions. The most recent computed tomography scan and endoscopic ultrasound (EUS) revealed an inflammatory mass that measured 3 x 2.6 cm and was heterogeneous, mildly hypoechoic, and lacked distinct margins (Figure 1). There was associated pancreatic ductal dilatation that was most prominent toward the head of the pancreas and tapered distally with no other overt mass lesions, lymphadenopathy, or nodularity. Fine-needle aspiration biopsies exhibited no evidence of malignancy. Carcinoembryonic antigen and cancer antigen 19-9 levels were unremarkable.

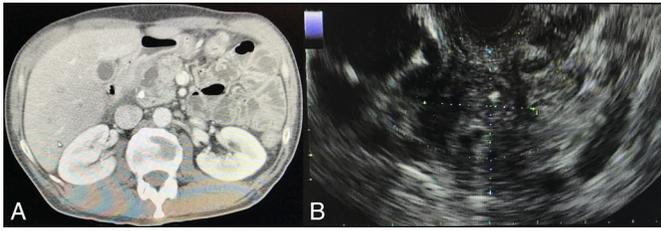
Surgical consultation recommended pancreaticoduodenectomy due to persistent pain, recurrent pancreatitis, and a dilated pancreatic duct that was unresponsive to traditional endoscopic therapy for pancreatic duct strictures. He underwent an uncomplicated, classic pancreaticoduodenectomy. Intraoperatively, there was minimal evidence

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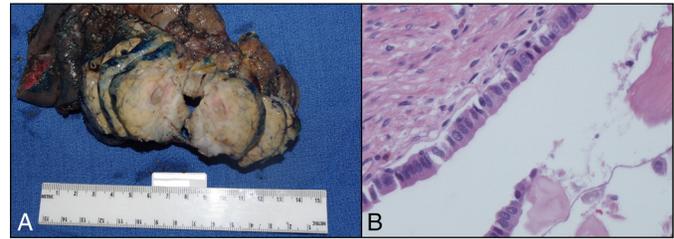
**Figure 1.** (A) Computed tomography and (B) endoscopic ultrasound of a heterogeneous, mildly hypoechoic inflammatory mass measuring 3 x 2.6 cm without distinct margins.

of chronic pancreatitis aside from some fullness and induration of the pancreatic head. The final pathology revealed a 1.5 x 1.3 cm intrapancreatic enteric duplication cyst that communicated with the main pancreatic duct. Minimal chronic pancreatitis changes were seen, and there was no evidence of malignancy (Figure 2). He was discharged on postoperative day 13 and has had no significant postoperative issues or readmissions for pain or recurrent acute pancreatitis.

## DISCUSSION

Pancreatic duplication cysts are rare congenital malformations, with only 57 cases documented in the literature.<sup>2</sup> It is postulated that intrapancreatic duplication cysts originate from the adjacent GI tract, become embedded in the pancreas, and eventually separate from the GI system. As these cysts fill with secretions, they enlarge and erode into the pancreatic duct, eventually obstructing the duct leading to pancreatitis.<sup>2,3</sup> Aside from pancreatitis, the symptomatology varies, including nausea, emesis, abdominal pain, gastritis, GI bleeding, and pleural effusions.<sup>2-4</sup>

In contrast, groove pancreatitis is a rare segmental chronic pancreatitis that refers to inflammation of the groove area between the pancreatic head, duodenum, and common bile duct. The typical patient presenting with these symptoms is a 40- to 50-year-old man with a history of alcohol and tobacco abuse. The excessive alcohol and tobacco intake increases the pancreatic fluid viscosity and consequently impairs outflow. The duodenum is often stenotic, and cysts can form in the duodenal wall and pancreatic head. The differential diagnosis for groove pancreatitis must include pancreatic cancer, autoimmune pancreatitis, and duodenal hamartoma. Although rare, intrapancreatic enteric duplication cysts should be included in the differential diagnosis for this presentation. The work-up for this differential diagnosis should include computed tomography, EUS, and endoscopic retrograde cholangiopancreatography. Considering our patient's



**Figure 2.** (A) Macroscopic view of specimen. (B) Enteric lining with gastric type epithelium.

symptoms, demographics, imaging findings, and the rarity of the true diagnosis, a diagnosis of groove pancreatitis is quite reasonable. EUS is the most sensitive modality for evaluating the pancreaticobiliary system; however, it can be limited by pancreatitis. As in this case, surgical resection should be considered in healthy patients due to the symptomatic nature of the cysts, the inability to differentiate from cancerous or precancerous lesions, and the small chance of malignant degeneration. This rare diagnosis should be considered in the differential for patients with recurrent pancreatitis, ductal obstruction, and concern for an obstructing pseudomass. Surgical resection is often the best diagnostic and therapeutic option in an otherwise healthy patient.

## DISCLOSURES

Author contributions: All authors contributed equally to the manuscript. E. Zoog is the article guarantor.

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Informed consent was obtained for this case report.

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