

Case Report

Annular pancreas in elderly male: a case report

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ABSTRACT

Annular pancreas (AP) is a rare congenital abnormality in which the ventral portion of the pancreas fails to rotate with the duodenum during embryological development, thus causing the ventral portion to remain partially or fully enveloped around the duodenum. The actual incidence of AP is unknown, as many cases are asymptomatic and undiagnosed. Adults with AP may present with a variety of symptoms suggestive of gastric outlet obstruction, or may present with gastrointestinal bleeding, pancreatitis, or biliary obstruction. Surgery continues to remain the diagnostic “gold standard” for AP, but imaging techniques such as CT, MRCP (Magnetic resonance cholangiopancreatography), ERCP (Endoscopic retrograde cholangiopancreatography) and EUS (Endoscopic ultrasound) can now be used to make the diagnosis. We report the case of a 65-year-old gentleman who presents with symptoms of gastric outlet obstruction who was diagnosed with AP by CECT (Contrast enhanced computed tomography) and MRCP.

Keywords: Annular pancreas, CECT, Embryological development

INTRODUCTION

Annular pancreas (AP) is a rare congenital abnormality in which the ventral portion of the pancreas fails to rotate with the duodenum during embryological development, thus causing the ventral portion to remain partially or fully enveloped around the duodenum.¹ The actual incidence of AP is unknown, as many cases are asymptomatic and undiagnosed. Adults with AP may present with a variety of symptoms suggestive of gastric outlet obstruction, or may present with gastrointestinal bleeding, pancreatitis, or biliary obstruction. Surgery continues to remain the diagnostic “gold standard” for AP, but imaging techniques such as CT, MRCP, ERCP and EUS can now be used to make the diagnosis.^{2,3} We report the case of a 65 year old gentleman who presents with symptoms of gastric outlet obstruction who was diagnosed with AP by CECT and MRCP.

CASE REPORT

A 60 years old male, who was known case of peptic ulcer disease, on treatment presented with features of gastric outlet obstruction.

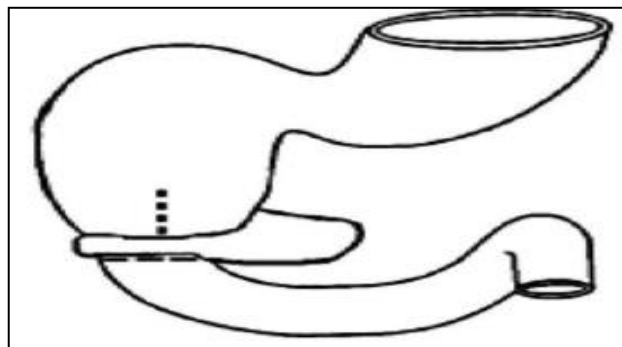


Figure 1: Modified Kimura's procedure.

He underwent UGIE (upper gastrointestinal endoscopy) that showed normal mucosa, no ulcers and pinhole opening at pylorus, scope not negotiable beyond it. CECT abdomen was done suggestive of pancreas encircling D2 segment of duodenum in the anterolateral and posterolateral part with its luminal compromise s/o AP. Modified Kimura's procedure with excision of fibrous band was done. Patient had uneventful recovery.



Figure 2: CECT of pancreas encircling duodenum.

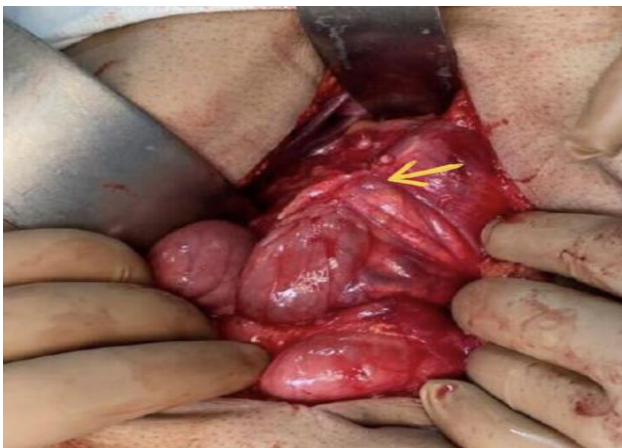


Figure 3: Intra operatively pancreas was seen encircling duodenum with fibrous band present anteriorly over duodenum.

DISCUSSION

There are three types of pancreatic fusion anomalies, AP, pancreas divisum, and portal AP, with the latter being the rarest of all of them.⁴ AP is a rare occurrence in adults. It was first reported by Tiedermann in 1818 and named as AP by Ecker in 1862. The first surgical treatment for obstructive AP was performed by Vidal in 1905. An incidence of 1.14% has been reported by Karaski et al based on institutional review of CT scans. Only 737 cases have been reported in English literature with slight female preponderance. The spectrum of clinical presentation in adult population is quite variable and may present as duodenal obstruction, pancreatitis or as

symptoms of peptic ulcer disease.⁵ It may rarely be associated with obstructive jaundice and even rarely malignancy. Diagnosis may require surgical confirmation in >40% of cases as each imaging modality has its limitations. The use of CECT in infants is limited by the paucity of abdominal fat which serves as a reference for enhancement. The use of CECT in adults is limited by the narrowness of the ring and by the fact that the pancreatic ring may lie intramurally in the duodenum without any plane existing in between. ERCP is invasive and can precipitate/exacerbate pancreatitis, besides the presence of a narrowed lumen may preclude its use. Use of MRCP is limited by the fact that it requires a dilated ductal system.

CONCLUSION

AP is a rare presentation in the elderly, yet a high index of suspicion needs to be maintained in elderly patients with a presentation of gastric and duodenal outlet obstruction. The role of EUS and MRCP is highly sensitive and are safe modalities as compared to standard ERCP. Surgical intervention is required whenever AP is symptomatic. In those who present as duodenal obstruction a simple enteric diversion procedure is done, with duodenoduodenostomy being the preferred procedure⁶. It has the advantage of being the most physiological by having the least blind loop segment. Pancreatic resection is reserved to those rarest cases where malignancy cannot be excluded.

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