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CASE REPORT

Rare Case of Annular Pancreas

Poojitha D,[1] Jameel Akther[2] and Sudarsan S[3,*]

[1]*Surgery Resident, Apollo Main Hospitals, Chennai, Tamailnadu*
[2]*Senior Consultant, General and Minimal Access Surgery, Apollo Main Hospitals, Chennai, Tamailnadu*
[3]*Academic Registrar, Minimal Access Surgery, Apollo Main Hospitals, Chennai, Tamilnadu*

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Abstract
One of the rare disorders noted during birth is Annular pancreas. In this disorder a slender band of pancreatic tissue engulfs the duodenum. This congenital anomaly in children produces symptoms like duodenal obstruction but mostly they produce symptoms in later stages of life. This is one of the rare clinical diagnosis. But once diagnosed immediate treatment can reduce the morbidity risk.

Keywords: Annular Pancreas, Down’s syndrome

*Corresponding Author: Sudarsan Srikanth
Email: sudarsansrikanth.1991@gmail.com

Introduction

The main pathophysiology behind this disease is the circular encasement of second part of duodenum by the pancreatic tissue due to migration of ventral pancreatic bud. This may be associated with other congenital defects, including Down's syndrome, malrotation, intestinal atresia and cardiac malformation.

This disorder can be classified as complete and incomplete type based on the location (Figure 1).

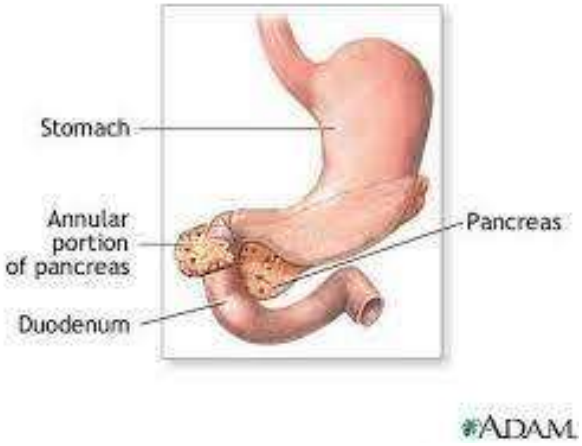

Figure 1.

COMPLETE TYPE:

This type on gross inspection we can notice the second part of duodenum being completely engulfed by the pancreatic tissue.

INCOMPLETE TYPE

This type the engulfing is noted partially and this is difficult to be made out and confirmed by MRCP or diagnostic laparoscopy

Epidemiology

True prevalence of annular pancreas is unknown. Before the availability of imaging techniques it was 3 of 20,000 in post-mortem reports and 3 of 24,519 in diagnostic abdominal surgeries [1].

Better imaging modalities have lead more significant identification of the disease which has come to 1 in 1000 cases [2,3].

Case report

A 54 year old male presented with complaints of abdominal bloating post prandially associated with loss of appetite and weight. Patient has lost 8kgs in 4 months.

Patient was advised a contrast enhanced CT of the abdomen which revealed second part of duodenum was compressed by pancreatic parenchyma and was also causing mild luminal narrowing of D2.

There was no significant volume loss of the pancreatic parenchyma, no calculi or calcification seen. The pancreatic duct was also normal (Figure 2).

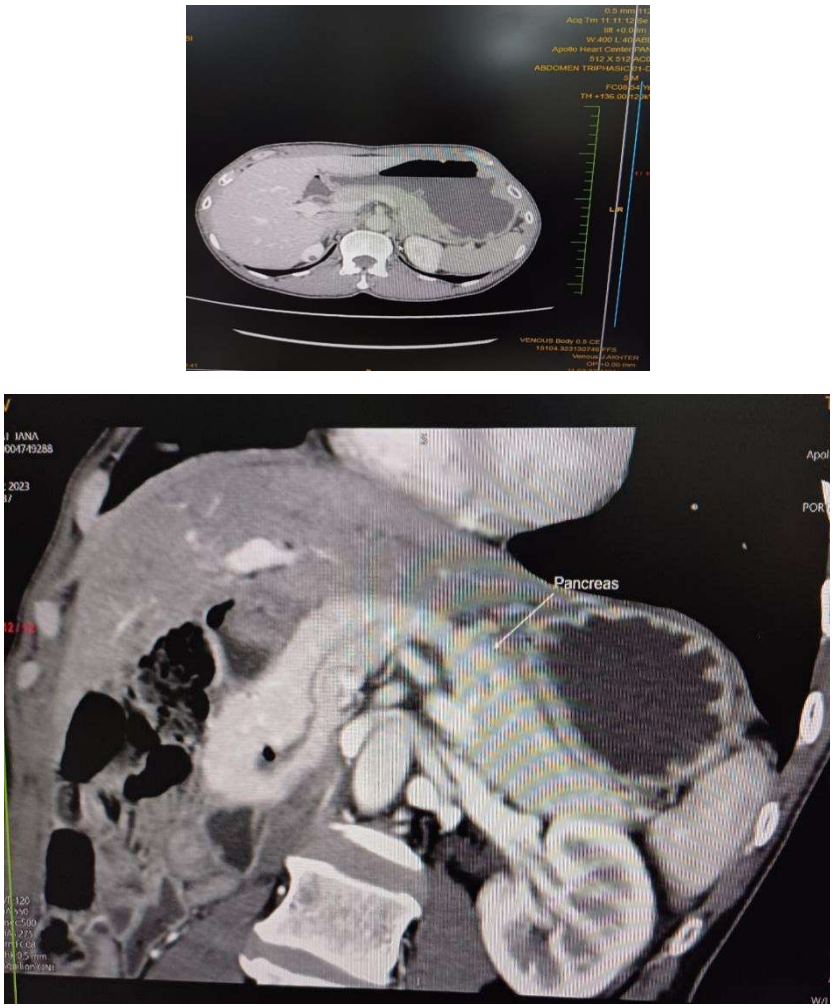

Figure 2.Contrast enchanced CT scan showing the encircling of second part of duodenum by pancreatic parenchyma

After pre-anesthetic evaluation the patient underwent laparoscopic loop gastrojejunostomy + Braun jejunojejunostomy. Patient tolerated the procedure well and recovered well post operatively (Figure 3).

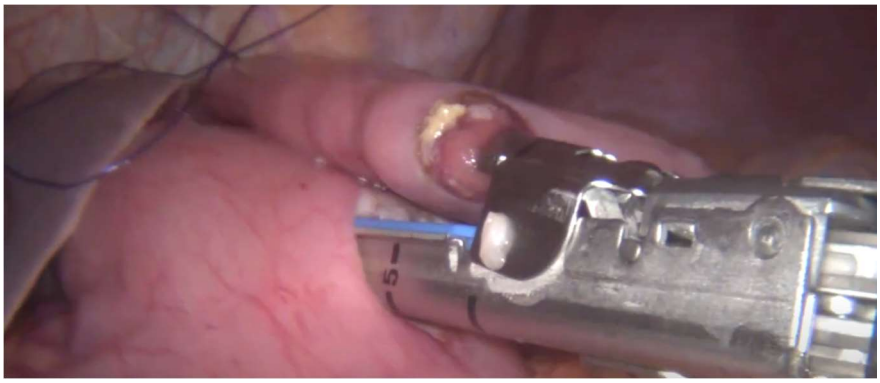

Figure 2: Intraoperative Picture of Gastro - Jejunostomy

Discussion

This disorder of annular pancreas usually has a late presentation in adult hood where it produces significant symptoms [4].

In intrauterine life during the fifth week of gestation, an outgrowth develops from primitive foregut and that further grows in to single dorsal and two ventral buds from which the pancreas develops. The fusion of ventral buds takes place at a rapid pace .ventral bud fuses with dorsal bud during seventh week of gestation as duodenum expands causing the ventral buds to rotate and fuse with the opposite side. A part of uncinate process and inferior head of pancreas is from ventral bud .The body of pancreas and tail is formed by dorsal bud. Main pancreatic duct is formed by fusion of duct from dorsal and ventral bud. The encirelent of duodenum takes place in annular pancreas due to the reason of non rotation of ventral bud along with duodenum. Many of the patients are usually asymptomatic .The patient in age group of 30 yrs-60 years usually presents with symptoms rarely patients can have biliary obstruction. The usual common symptoms are vague abdominal pain, fullness after a meal, vomiting, hematemesis, acute or chronic pancreatitis [5].

Conflicts of interest

The authors declares that they do not have conflict of interest.

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