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Recurrent Pancreatitis Revealing Pancreas Divisum in a Young Patient with Multiple Congenital Malformations

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ABSTRACT

A 16-year-old boy with recurrent episodes of acute pancreatitis was found to have an incomplete pancreas divisum on MRCP, along with associated renal and adrenal congenital anomalies. This ductal malformation likely contributed to his repeated pancreatitis. The case highlights the importance of advanced imaging, particularly MRCP, in identifying pancreatic duct variants in young patients with unexplained or recurrent pancreatitis.

INTRODUCTION

Pancreas divisum is the most frequent congenital pancreatic anomaly, presenting in up to 7% of individuals, being asymptomatic in up to 95% of them, with the anomaly found incidentally on abdominal imaging[1]. it is a congenital malformation of the pancreatic ductal system which is characterized by the failure of fusion of the ventral and dorsal pancreatic ducts in the seventh week of foetal development[2]

This case illustrates a rare presentation of severe acute pancreatitis in an adolescent, occurring in the context of an incomplete pancreas divisum and associated renal and adrenal developmental anomalies. It highlights the importance of advanced imaging in identifying ductal malformations that may contribute to recurrent or severe pancreatitis in young patients.

CASE REPORT

This report describes the case of a 16-year-old boy with a known history of chronic pancreatitis, who had previously experienced four documented episodes of acute pancreatitis, the most recent in August 2025. His medical background was otherwise unremarkable, with no history of diabetes, hypertension, or cardiovascular, hepatic, or renal disease. Two congenital anomalies were known: a solitary right kidney and a single right adrenal gland.

The patient was admitted with a 24-hour history of severe epigastric pain radiating to the back, associated with vomiting and significant deterioration of his general condition, yet without fever. On physical examination, he exhibited marked epigastric tenderness but no guarding, hemodynamic instability, or clinical jaundice.

Laboratory investigations revealed a markedly elevated lipase level (1,964 UI/L). Inflammatory markers were also significantly increased, with leukocytosis at 13,970/mm³ and a C-reactive protein that rose from 90.2 mg/L at 48 hours to 140.5 mg/L on day 7, before decreasing to 6.3 mg/L by day 9. Renal function showed a notable rise in urea (from 0.34 to 0.72 g/L). Liver tests demonstrated an elevated alkaline phosphatase level (239 UI/L), normal GGT, and hyperbilirubinemia (total bilirubin 15.4 mg/L, predominantly direct).

Imaging played a central role in clarifying the underlying etiology. Contrast-enhanced CT revealed severe acute pancreatitis, classified as Balthazar grade E with a CTSI score of 8, and no evidence of gallbladder distension or wall abnormality. Abdominal ultrasound confirmed a normal, thin-walled gallbladder with no biliary dilation or obstruction.

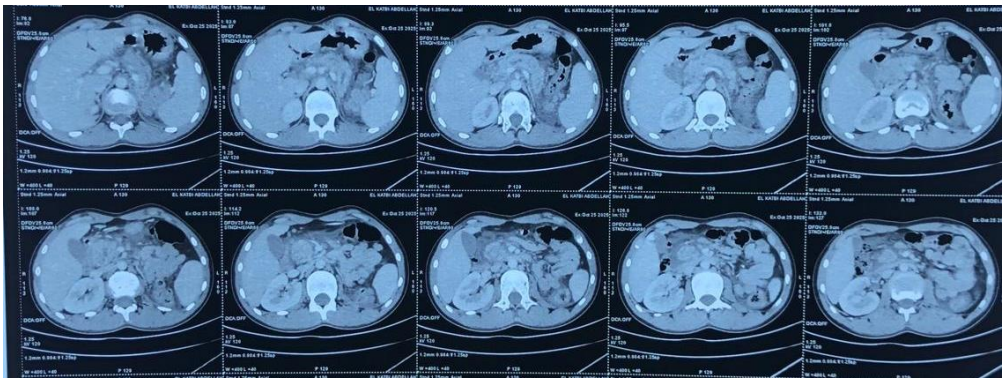

Figure 1 ct scan images of pancreas divisum

MRCP provided crucial diagnostic insight, identifying an incomplete pancreas divisum characterized by separation of the main pancreatic duct at the body–tail junction, a "fish-tail" configuration of the pancreatic tail, two ventral ducts draining into the minor papilla, and a dominant dorsal duct draining into the major papilla. The examination also confirmed the associated congenital anomalies: a solitary right kidney and a single right adrenal gland.

Figure 2 MRI image showing a fish-tail appearance of the pancreas

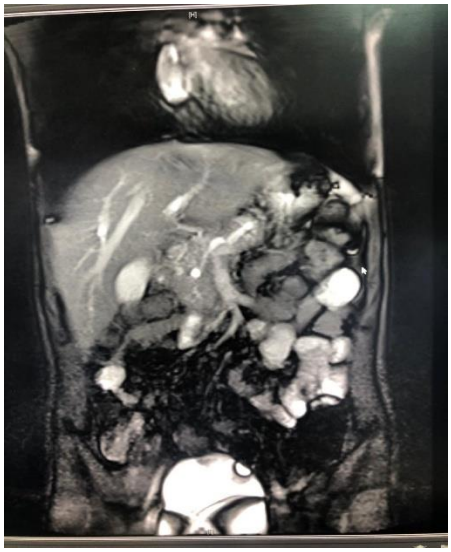

Figure 3 FRONTAL MRI SLICE SCHOWING THE PANCREAS

DISCUSSION

Pancreas divisum is a rare condition found in about 0.5-10% of the population with a lower reported rate of 1-2% in the Asian and African populations. Most cases of PD are asymptomatic (95%). However, some may be revealed by recurrent acute pancreatitis (RAP), pancreatic-type pain or even chronic pancreatitis[2]

Pancreas divisum is classified into three types: type 1 (the most common), in which the ventral and dorsal pancreatic ducts are completely divided; type 2, in which the ventral pancreatic duct is absent; and type 3, in which a thin duct between the two systems is present[3]

The suggested mechanism for pancreatitis in pancreas divisum cases is linked to the anatomical abnormality. In these instances, pancreatic drainage predominantly occurs through the minor papilla. Due to the minor papilla's small size, this results in increased pressure within the pancreatic duct, which can eventually cause pancreatitis[3]

Enhanced Diagnostic Accuracy: The combination of improved imaging techniques, endoscopic approaches, and diagnostic criteria has led to enhanced diagnostic accuracy for Pancreatic Divisum. Clinicians can now better differentiate Pancreatic Divisum from other pancreatic conditions, such as chronic pancreatitis or sphincter of Oddi dysfunction, leading to more appropriate treatment strategies and improved patient outcomes.[4]

Recently, MRCP and EUS have emerged as viable alternatives for diagnosing PD, with reports suggesting that EUS has a higher diagnostic rate than MRCP[5]

CONCLUSION

Pancreas divisum, although common and often asymptomatic, can be responsible for recurrent or severe episodes of acute pancreatitis when ductal drainage is compromised. This case emphasizes the diagnostic value of advanced imaging, particularly MRCP, in recognizing incomplete forms of pancreas divisum and distinguishing them from other pancreatic pathologies. The association with additional congenital anomalies, as observed in this patient, underscores the need for a comprehensive evaluation. Early and accurate identification of ductal malformations allows clinicians to optimize management strategies, reduce recurrence risk, and improve long-term outcomes in young patients presenting with unexplained or recurrent pancreatitis.

REFERENCES

1) P. Aseni et al., « Role of Endoscopic Ultrasound in Diagnosis and Management of Pancreas Divisum: A Case Study and Literature Review », Appl. Sci., vol. 15, nº 6, p. 2948, janv. 2025, doi: 10.3390/app15062948.
2) I. Zouaki et al., « Pancreas divisum unmasked: a case report », Pan Afr. Med. J., vol. 49, 2024, doi: 10.11604/pamj.2024.49.48.45004.
3) S. Duggal, O. Akahara, et C. Didia, « Chronic Pancreatitis and Pancreas Divisum: A Case Report of Recurrent Management Challenges », Cureus, avr. 2025, doi: 10.7759/cureus.82313.
4) S. Sukho, « Advancements in Understanding and Managing Pancreatic Divisum », JOP J. Pancreas, vol. 24, nº 3, 2023.
5) M. Nagahama et al., « Early Chronic Pancreatitis Findings by Endoscopic Ultrasonography (EUS) in Asymptomatic Patients with Pancreas Divisum », Diagnostics, vol. 15, nº 3, p. 253, janv. 2025, doi: 10.3390/diagnostics15030253.