Pancreatic Divisum Causing Recurrent Pancreatitis in an 8-Year-Old Child

**Case Summary**

An 8-year-old boy presented with acute upper abdominal pain. He had the two episodes of similar pain in the past year, which was managed conservatively at an outside hospital. His serum lipase was found to be elevated; the rest of his blood investigations were normal. The diagnosis of relapsing acute pancreatitis was made.

Abdominal ultrasound suggested chronic calcific pancreatitis, dilated main pancreatic duct (7 mm), and no peripancreatic collection. Magnetic resonance cholangiopancreatography revealed chronic atrophic pancreatitis with dilated dorsal pancreatic duct and a calculus of 5 mm × 5 mm at the junction of the head and neck [Figure 1]. An endoscopic retrograde cholangiopancreatography (ERCP) with pancreaticogram from the minor papilla showed mildly dilated pancreatic duct to tail with multiple calculi within and presence of incomplete pancreatic divisum (PD) [Figure 2]. Minor papilla sphincterotomy was done and stones were extracted with basket performing a near-total ductal clearance. A 5-Fr stent was kept in the pancreatic duct which was removed after 6 weeks. The boy is asymptomatic for the past 5 years.

First described by Regnier Graff in 1664, PD is a congenital pancreatic duct anomaly which results from failure of fusion of dorsal and ventral pancreatic ducts during the 7th week of embryogenesis. Its incidence is 4%–14%, although lower (1%–2%) in the Asian population. Three types have been described. In Type 1, there is a total failure of fusion between the two ducts; in Type 2, the ventral duct is completely absent; and in Type 3 (incomplete PD), wherein there is a small communication between the two ducts. The inadequate drainage of the pancreas through the small dorsal duct through minor papilla results in the spectrum of diseases – relapsing acute pancreatitis, chronic pancreatitis, and pancreatic pain. However, only 5% of the population becomes symptomatic for reasons unknown.

A brief review of the literature in the same age group suggests that PD is a risk factor for acute recurrent pancreatitis and chronic pancreatitis in children independent of the genetic risk factors as per an analysis by Lin et al. in 52 patients with PD. Endotherapy in the form of ERCP and sphincterotomy has been found to be safe and effective in the pediatric age group as per studies by Lin et al. (2019), Yan et al., Pan et al., Lin et al. (2021), and Wen et al. in 52, 1, 46, 27, and 38 pediatric patients, respectively. In a study on seven patients, Snajdauf et al. reported improvement in three patients following ERCP, unsuccessful papillotomy in three patients, and recurrent pancreatitis requiring duodenum preserving pancreatic head resection in one patient. Associations with choledochal cyst, abnormal pancreaticobiliary junction, and malrotation have also been reported. Our patient responded well to ERCP and has no complaints.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal
guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that patient’s name and initials will not be published and due efforts will be made to conceal patient identity, but anonymity cannot be guaranteed.  

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**Conflicts of interest**  
There are no conflicts of interest.

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