A twisted plot: Pancreas Divisum with Right Sided Pancreatiopleural Fistula

Hareem Syed, MD[1], Priya Sasankan, MD, MBA[1], Prabhleen Chahal, MD[1]
1. Cleveland Clinic Foundation

Clinical Pearls

- Elevated amylase and lipase in the pleural fluid- suspect pancreatic source!
- MRCP is the imaging of choice
- Management is surgical vs endoscopic

CONTACT

Hareem Syed, MD
Cleveland Clinic
Email: syedh2@ccf.org
Twitter: @hareemsyed7

INTRODUCTION

We report on a 53-year-old male with a past medical history significant for chronic pancreatitis who presented with a right-sided pleural effusion secondary to pancreaticopleural fistula with pancreatic divisum. Pleural effusion secondary to pancreaticopleural fistula (PPF) is a rare complication of acute or chronic pancreatitis and usually presents with a left-sided pleural effusion. This case also highlights the difficulty and significant delay in diagnosing pancreas divisum on cross-sectional imaging

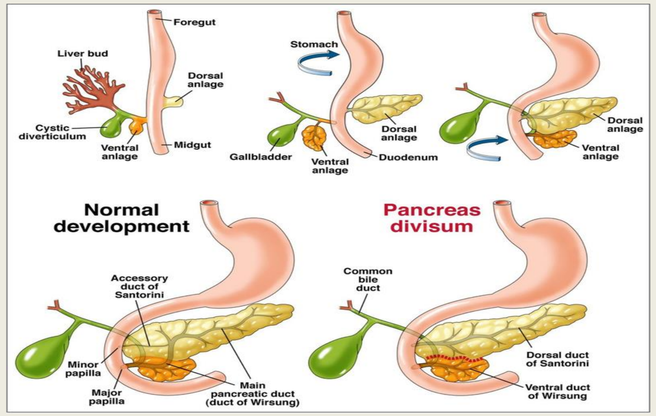
CASE DESCRIPTION

53-year-old male with a medical history significant for chronic pancreatitis complicated by pancreatic ascites, walled-off necrosis, splenic and portal vein thrombosis, alcoholic gastritis, and polysubstance use presented with five days of dyspnea with new and worsening oxygen requirements. Chest x-ray showed a new moderate right-sided pleural effusion. Pleural fluid analysis revealed elevated lipase of >3,000 U/L and amylase of 21,008 U/L concerning for a pancreaticopleural fistula. MRI of pancreas showed a disconnected duct at the tail of the pancreas with a fistula extending into the mediastinum and peritoneum.

CASE DESCRIPTION cont.

During ERCP a bulging minor papilla was noted. After failed initial attempts at cannulating ventral duct, minor papilla was approached and dorsal duct was cannulated. Pancreatogram revealed a complete pancreatic divisum with a leak in the tail of the pancreas. A temporary plastic stent was placed in the dorsal duct after minor papilla sphincterotomy.

Follow up:
2 months later: repeat ERCP, stent was exchanged and a new temporary stent was placed just distal to the site of the fistula.
6 weeks later: Another ERCP where the temporary stent was removed and no pancreatic duct leak was noted indicating healing of the pancreatic fistula.



DISCUSSION

PPF is a rare complication of pancreatitis that typically presents as large, recurrent, left-sided pleural effusion often refractory to thoracentesis management. Transpapillary stent placement in the pancreatic duct is widely used in the management of PPF. Our case shows a rare right-sided presentation of PPF in the setting of a newly diagnosed pancreas divisum missed on numerous previous cross-sectional imaging. High clinical suspicion of underlying divisum raised by endoscopic and imaging findings led to successful endoscopic management of this complex case.

MRCP Pancreas showing pancreas divisum and disconnected duct

REFERENCES

1. Gutta A, Fogel E, Sherman S. Identification and management of pancreas divisum. Expert Rev Gastroenterol Hepatol. 2019 Nov;13(11):1089-1105. doi: 10.1080/17474124.2019.1685871. Epub 2019 Nov 8. PMID: 31663403; PMCID: PMC6872911.