HEMORRHAGIC PANCREATIC PSEUDOCYST IN A PATIENT WITH PANCREATIC DIVISUM MANAGED WITH CYSTOGASTROSTOMY

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Introduction
- Pancreatic divisum is the most common congenital pancreatic anomaly affecting 10% of the Western population. Failure of fusion of the ventral and dorsal duct system with narrowing of the minor papillary orifice makes the pancreas prone to injury due to high intrapancreatic dorsal ductal pressure
- Fewer than 5% are symptomatic with infrequent bouts of pancreatitis-type pain and even fewer develop chronic pancreatitis or pseudocyst formation.
- Infrequently, hemorrhaging can cause pancreatic pseudocysts to grow very large and become extremely painful and life-threatening.

Case Presentation
- 43-year-old Caucasian male with a history of alcohol-induced pancreatitis was admitted for abdominal pain, nausea/emesis, and 13 lb weight loss over two-week duration
- He reported abstinence from alcohol for the past year with recurrent pancreatic flares managed conservatively in multiple hospitalizations
- Labs revealed normal CA19-9, acute anemia (-8 Hgb) with no overt evidence of bleed and CT yielding multiple large pseudocysts: 22 x 10.8 cm hemorrhagic pancreatic pseudocyst along the anterior abdominal wall (Figure 1), 16 x 18.9 cm heterogeneous cyst along the left anterolateral chest wall (Figure 3), and 2.9 cm hemorrhagic pseudocyst at the tail of the pancreas (Figure 2).
- CT-angiogram revealed no active bleeding but marked pancreatic duct dilation
- Due to suspected pancreatic duct disruption, ERCP was performed revealing pancreatic divisum and he underwent common bile and pancreatic duct sphincterotomy without evidence of any stone debris.
- Endoscopic-ultrasound for presumed pancreatic head mass was unrevealing except for a large heterogeneous fluid collection measuring 10 x 9 cm within the gastric body. FNA yielded 5mL of sanguineous fluid.
- The patient underwent cystogastrostomy with AXIOS stent placement to drain the hemorrhagic pseudocyst into the stomach and monitored within the ICU post-operatively.
- He had self-limiting melena with no signs of infection and improved general appearance with resolution of his abdominal pain.
- Follow-up imaging and EGD revealed complete collapse of the pseudocyst with the decision for AXIOS stent removal.
- Patient is currently tolerating a low-fat diet with no recurrent episodes of abdominal pain.

Discussion
- This case illustrates a patient with pancreatic divisum with recurrent bouts of pancreatitis resulting in hemorrhagic pancreatic pseudocysts formation with great outcome to cystogastrostomy Axios stent placement.
- It is well-established that compromise of pancreatic duct leads to recurrent pancreatic fluid collections and severe outcomes. Observational studies have postulated pancreatic divisum reduces the threshold in developing pancreatic diseases such as pseudocysts from known primary insults ie alcohol, trauma, etc
- According to the Atlanta Classification 2012, pseudocyst of the pancreas develops 4 weeks after the development of acute pancreatitis. Infection, bleeding, obstruction, and rupture are some of the complications of pseudocyst of pancreas.
- Hemorrhage into the pseudocyst occurs due to the erosion of the arterial walls abutting the pseudocyst due to the enzymatic action of the fluid present in the pseudocyst. Splenic artery is most commonly involved (30–50%), followed by the gastroduodenal (17%) and pancreaticoduodenal arteries (11%)
- Hemorrhagic pseudocyst of pancreas carries a very high mortality of 40%.
- Most pseudocyst are asymptomatic without further treatment, while as symptomatic pseudocyst require drainage.
- Studies between endoscopic vs surgical drainage reveal similar favorable outcomes, but endoscopic techniques were associated with reduced hospital length of stay and lower costs.
- A combination of EUS/ERCP ductal sphincterotomy and cystogastrostomy with stent placement may aid cases with dual pancreatic divisum and hemorrhagic pseudocystic formation.
- Pancreatic hemorrhagic pseudocyst is an uncommon but serious complication of recurrent pancreatitis, for which pancreatic divisum should be in the differential diagnosis.

References