A Lump in My Gut: Palpable Right Upper Quadrant Mass in a Patient with Acute Pancreatitis

Matthew Butler, MD & Scott Grisolano, MD
University of Kansas Medical Center

Background

- Acute pancreatitis is a common medical condition
- Several uncommon and potentially fatal sequelae
- Correct and timely diagnosis necessary to prevent potential serious complications
- This case illustrates a gastroduodenal artery (GDA) pseudoaneurysm with fistula to the portal vein, a rare and potentially fatal complication of pancreatitis

Case Description

Chief Complaint

- 2 day history of nausea, vomiting, and epigastric abdominal pain radiating to the back
- Walnut-sized mass in his right upper quadrant (RUQ) for 1 month that has been enlarging

History of Illness

- 62 year old Caucasian man
- Nausea, vomiting, and abdominal pain started after weekend of binge drinking – has been improving
- RUQ mass presented shortly after recent hospitalization 1 month ago for alcohol-induced acute pancreatitis – treated conservatively
- Mass is non-tender, but has been enlarging over the past month

Prior History

- No medical problems aside from recent hospitalization for acute pancreatitis
- No prior surgeries and no medications or allergies
- Drinks >6 drinks/day 2-3 times a week

Background

Physical Exam

- Severe abdominal pain in the epigastric region radiating to the back without rebound or guarding
- Firm, palpable 4x4 cm mass on the medial border of RUQ with faint bruit
- No other significant exam findings present

Labs/Imaging

- New anemia with hemoglobin of 9.9 g/dL
- Liver function tests were within normal limits
- Mildly elevated lipase of 83 U/L
- CT abdomen: 1) inflammation and fat stranding around pancreas 2) possible vascular mass at or near the gastroduodenal artery

Initial Management

- Patient was treated for acute pancreatitis with conservative medical management - IV fluids, pain control, and kept NPO
- CT angiography (CTA) to assess possible vascular lesion
- CTA findings: 4.4 x 4.0 x 4.0 cm pseudoaneurysm of gastroduodenal artery (GDA) with fistula to portal vein
- Patient underwent urgent percutaneous embolization of lesion – correcting both the large pseudoaneurysm and fistula

Hospital Course

- Diet was advanced without difficulty
- Hemoglobin remained stable throughout hospitalization
- Patient was discharged after 24 hours without complications

Images

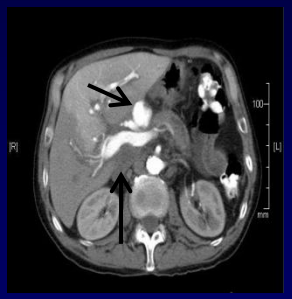

Figure 1: CTA of large GDA pseudoaneurysm with fistula to the portal vein

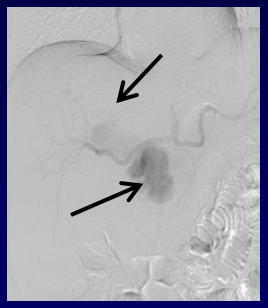

Figure 2: Mesenteric angiography of GDA pseudoaneurysm with arterioportal fistula

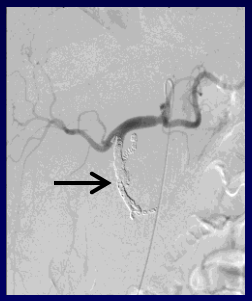

Figure 3: Angiography of repaired GDA pseudoaneurysm and fistula via intravascular coils

Discussion

Pseudoaneurysms in Pancreatitis

- Rare complication - estimated to occur in ~3.5% of pancreatitis cases
- Typically take 4-6 weeks after acute pancreatitis to develop
- Increased incidence after moderate or severe pancreatitis with peripancreatic inflammation and fluid collection
- Most commonly in splenic artery (30%) followed by GDA (30%), PDA (20%), and gastric artery (5%)

Presentation

- Bleeding is most common: ranging from asymptomatic anemia due to slow bleed to massive, fatal hemorrhage
- Abdominal pain from local enlargement of lesion
- Rarely presents with palpable mass and bruit

Diagnosis / Treatment

- CT angiogram is initial diagnostic test of choice
- Mesenteric angiography required to confirm diagnosis
- Initial treatment with intravascular coiling, but surgery may be required if large bleed or bleeding not controlled

Complications of Pseudoaneurysms

- Bleeding: "Herald bleed" can occur hours to days before massive hemorrhage – most concerning complication
- Fistula formation: rare, but often leads to further long-term complications if not identified early

Complications of Arterioportal Fistulas

- Hepatic congestion: pre-hepatic portal hypertension, ascites, variceal bleeding, and ultimately cirrhosis
- Hemodynamic imbalances from large fistula: high-output heart failure and intestinal ischemia from the shunt