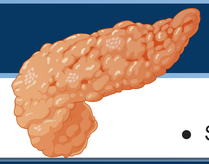
From inflammation to exsanguination: A case of severe pancreatitis complicated by a fatal hemorrhagic pseudoaneurysm in a 23-year-old

Anjali Rajagopal, MBBS[1]; Ruchir Paladiya, MBBS[2]; Osama Siddiqui, MD[2]
[1]Department of Internal Medicine Medicine, [2]Department of Gastroenterology

ACG 2025

INTRODUCTION



- Severe acute pancreatitis (SAP) refers to AP with persistent organ failure in one or more organs for >48 hours and has mortality rates as high as 50%.
- Scoring systems & imaging alone do not accurately determine which patients develop severe pancreatitis. This case highlights clinical deterioration in a patient with an indolent presentation of alcoholic pancreatitis.

CASE DESCRIPTION

Presentation

An otherwise healthy 23-year-old woman with a past medical history of alcohol use presented to the ED with progressively worsening abdominal pain, nausea, and retching for two weeks.

Prior Episodes

She had prior visits for nausea & diarrhea; initially attributed to IBS. Prior abdominal ultrasound was notable for right liver heterogeneity but negative for cholelithiasis.

Investigations

Labs: WBC 41.1 K/µL, Hb 15.1 g/dL Na 117 mEq/L, BUN 23 mg/dL, glucose 142 mg/dL, Ca 12.4 mg/dL, lactate 4.2 mmol/L, lipase 48 U/L. IgG4 10.4 mg/dL. Contrast CT of the abdomen and pelvis demonstrated severe pancreatitis with swelling, possible necrosis, and extensive peripancreatic/free abdominal fluid.

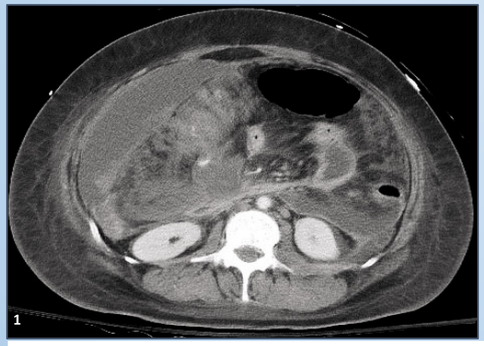
Hospital Course

The patient was diagnosed with alcoholic pancreatitis and initially managed with IV hydration and pain control. Hb dropped to 5.9 g/dL on day 4 with worsening peripancreatic fluid and hemorrhage. She was intubated for hypoxic respiratory failure; required vasopressors and blood transfusions. Fluid collections increased; underwent IR embolization (gastroduodenal and dorsal pancreatic artery pseudoaneurysm), ERCP, and cystogastrostomy. She then, suffered cardiac arrest; ROSC achieved after six rounds of CPR and triple vasopressor with massive transfusion protocol. She ultimately decompensated secondary to suspected abdominal compartment syndrome and passed away under comfort measures.

20%
Develop severe acute pancreatitis

1.3-10%
Develop pseudoaneurysms
Most patients are asymptomatic until the pseudoaneurysm ruptures.

3%
Develop bleeding from pseudoaneurysms
Active bleeding from pseudoaneurysms can occur independent of size.



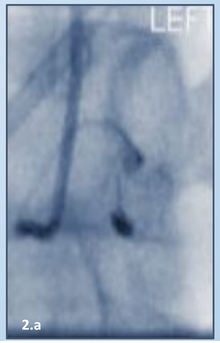
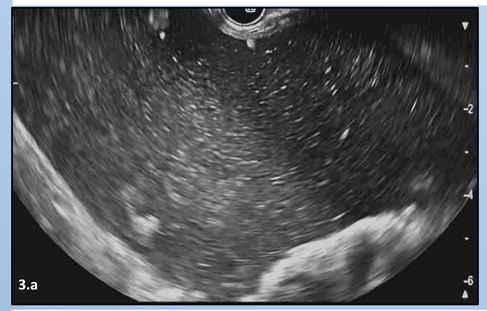


Fig. 1. CT abdomen/pelvis with contrast depicting worsening multifocal mixed density fluid collections in the abdomen and pelvis, with hemorrhagic components and extensive peripancreatic inflammatory changes.
Fig. 2.a&b depicting dorsal pancreatic artery and gastroduodenal artery pseudoaneurysms.



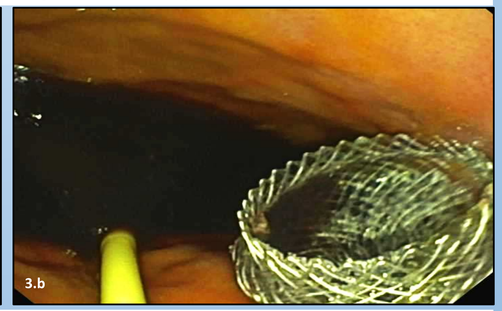


Fig. 3. *Endoscopic ultrasound notable for cystic pancreatic head lesion.*
Fig. 3.a *depicting fluid collection.* ***Fig. 3.b*** *depicting the deployment of an AXIOS stent.*

DISCUSSION

- Early (< 24 hours) prognostication of SAP remains challenging, despite the existence of scoring criteria. Only 20% of patients develop SAP, & sequelae such as pseudoaneurysms occur in 1.3-10% of patients, with 3% developing active bleeding independent of size.
- Management is guided by the size, anatomy, and hemodynamic status of the patient.
- Transcatheter arterial embolization is first line therapy however has a rebleeding rate of 10-20%. Other approaches include endovascular techniques such as coil embolization, EUS-guided procedures, percutaneous embolization, and surgical options in severe cases.
- Combined approaches with EUS-guided drainage are often used in patients with pancreatic fluid collections. Despite embolization, & transient improvement, our patient suffered fatal rupture, highlighting its unpredictable course.

REFERENCES

1. Søreide K, Barreto SG, Pandanaboyana S. Severe acute pancreatitis. British Journal of Surgery. 2024 Aug 2;111(8).
2. Regus S, Lang W. Rupture risk and etiology of visceral artery aneurysms and pseudoaneurysms: a single-center experience. Vascular and endovascular surgery. 2016 Jan;50(1):10-5.
3. Hoilat, G.J., Mathew, G.å and Ahmad, H., 2017. Pancreatic pseudoaneurysm.Zerem E, Kurtcehajic A, Kunosić S, Malkočević DZ, Zerem O.
4. Current trends in acute pancreatitis: Diagnostic and therapeutic challenges. World Journal of Gastroenterology. 2023 May 5;29(18):2747.
5. Lee PJ, Papachristou GI. Management of severe acute pancreatitis. Current treatment options in gastroenterology. 2020 Dec;18:670-81.

Presenter: **Anjali Rajagopal, MBBS**
Affiliation: Department of Medicine, University of Connecticut Health Center
Email: dranjalirajagopal@gmail.com