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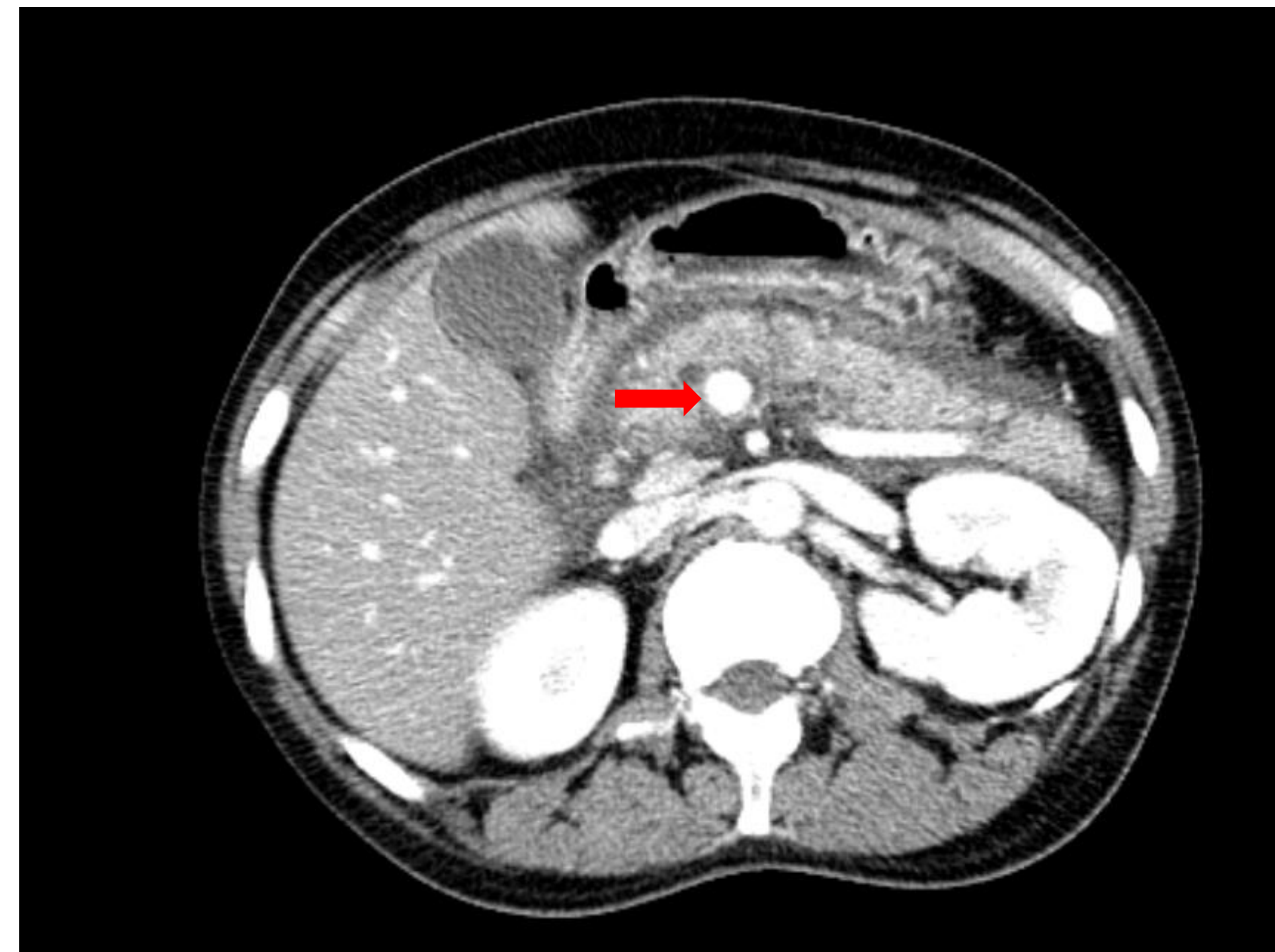
## Background

Pancreatic pseudoaneurysm is a rare vascular complication of pancreatitis, resulting from erosion of pancreatic or peripancreatic artery into a pseudocyst<sup>1</sup>. If left untreated, it may result in fatal complications. Here we report a unique case of pseudoaneurysm from gastroduodenal artery in a patient with recurrent episodes of acute pancreatitis, which was managed successfully with coil embolization.

## Case Report

A 34-year-old female, presented to the ED with epigastric pain of one day duration, associated with nausea and vomiting. She reports of getting intermittent abdominal pain that has been going on for a while. She drinks 3 cans of beer every other day. Her vitals were temperature of 97.6-degree Fahrenheit, heart rate 91, respiratory rate 16, blood pressure 107/76, oxygen saturation 100% in room air. Abdominal examination was significant for tenderness in the epigastric region. Labs were significant for elevated lipase of 988, and triglyceride (TG) 2869. CT Abdomen with contrast showed necrotizing pancreatitis and peripancreatic pseudoaneurysm along the gastroduodenal artery. Patient was taken for emergent coil embolization of 6 mm pseudoaneurysm arising from proximal right gastroepiploic artery. Following the procedure, patient was given supportive care for pancreatitis with aggressive IV fluids and insulin infusion for hypertriglyceridemia. Due to elevated TG level, a lipoprotein apheresis was obtained to rule out hereditary disorders which was negative.

## Imaging



CT abdomen and pelvis with contrast showing pancreatic pseudoaneurysm (red arrow).

## Conclusion

Pancreatic pseudoaneurysm should be suspected in patients with chronic pancreatitis presenting with epigastric pain. Prompt diagnosis and timely intervention is necessary to improve outcome as untreated patients have a mortality rate more than 90%.

## References

1. Mathew G, Ahmad H. Pancreatic Pseudoaneurysm. [Updated 2019 Jan 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK430937/>
2. Gurala, Dhineshreddy et al. "Pancreatic Pseudoaneurysm from a Gastroduodenal Artery." *Case reports in gastroenterology* vol. 13,3 450-455. 30 Oct. 2019, doi:10.1159/000503895

## Discussion

- Pancreatic pseudoaneurysm usually occurs when there is an erosion of a peripancreatic or pancreatic artery into a pseudocyst. Most commonly involved arteries in order of frequency are the splenic artery with up to 50% of cases, the gastroduodenal artery (15%), and less frequently the pancreaticoduodenal artery, the superior mesenteric artery, the left gastric artery and the hepatic artery.
- Pseudoaneurysm differs from a true aneurysm with the wall of aneurysm consists of fibrous tissue instead of arterial tissue, which contains a hematoma that can enlarge or rupture. This damage occurs as a consequence of autodigestion and weakening of arterial wall by pancreatic juices or leak from a pancreatic anastomosis.
- Common presenting symptoms may vary from being asymptomatic to abdominal pain or bleeding secondary to rupture.
- CT of the abdomen and pelvis with contrast is usually sensitive for diagnosis but CT angiogram is the gold standard.
- Once pseudoaneurysm is diagnosed, it should be treated immediately because of increased mortality of up to 90% in untreated patients and 12.5% in treated patients<sup>2</sup>. These patients are often hemodynamically unstable and also need aggressive resuscitation and invasive hemodynamic monitoring.
- The current standard of therapy is to control the bleeding by endovascular trans-arterial catheter embolization or by placement of a covered stent or surgery.
- Even though embolization has increased the success rate, there is still an increased risk of recurrence and an overall mortality rate of 16%. Mortality rate after surgery varies from 20–30%<sup>1</sup>