

## Intrasplenic Pancreatic Pseudocyst: A Rare Complication of Acute Pancreatitis

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### Case Report

Splenic involvement secondary to acute pancreatitis is rare (approximately 2%), but can include hemorrhage, splenic rupture, vascular injury, or pseudocyst formation.<sup>1</sup> A 46-year-old man presented with left upper quadrant (LUQ) abdominal pain 3 months after a moderately severe case of acute alcoholic pancreatitis. He was afebrile, hemodynamically stable, and with LUQ tenderness on exam. Labs were significant for an amylase level of 113 U/L and a normal lipase. Right upper quadrant (RUQ) ultrasound was unremarkable. Contrast-enhanced computed tomography (CT) revealed residual changes consistent with prior pancreatitis and an ill-defined, 1-cm focal hypodensity in the tail of pancreas consistent with a developing pancreatic pseudocyst (Figure 1). He was treated conservatively with bowel rest, pain control, and intravenous fluids, and his symptoms resolved. Five months later, the patient presented with similar complaints. Repeat CT demonstrated an interval progression of the pancreatic tail lesion with extension into the spleen, and increased peripancreatic inflammation at the splenic flexure with short segmental colonic wall thickening (Figure 2). Endoscopic ultrasound (EUS) revealed chronic pancreatitis, a 2.7 cm x 2.8 cm thin-walled cystic lesion in the pancreatic tail with extension into the spleen, and another 2.3 cm x 2.1 cm cystic lesion in the spleen. EUS-guided fine needle aspiration yielded 5 mL of turbid, viscous fluid with an amylase level of 3,100 U/L, rare white blood cells, and inflammatory cells without evidence of malignancy, consistent with a pancreatic pseudocyst. The patient responded to conservative measures, and follow-up imaging after 3 months revealed resolution of the pseudocyst.

The proposed mechanisms for the development of intrasplenic pancreatic pseudocyst include direct extension of the pancreatic cyst into the hilum of the spleen, pancreatic enzymes exerting digestive effects on splenic vasculature and parenchyma, pancreatitis occurring in ectopic intrasplenic pancreatic tissue, and liquefaction of splenic infarcts secondary to thrombosis



**Figure 1.** Residual changes consistent with prior pancreatitis, and an ill-defined, 1-cm focal hypodensity in the tail of the pancreas, consistent with a developing pancreatic pseudocyst.



**Figure 2.** Interval progression of the pancreatic tail lesion with extension into the spleen and increased peripancreatic inflammation.

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of the splenic vessels.<sup>1</sup> The diagnosis can be confirmed by ultrasound or CT scan. One of the following 3 criteria should be used to diagnose the pancreatic origin of these lesions: the presence of pancreatic tissue in or around the wall of the cyst, an amylase level in the cyst fluid that is higher than the serum amylase level, or a gross or microscopic evidence of pancreatitis without a history of trauma or evidence of previous splenic disease.<sup>2</sup> Our patient fulfilled all of these criteria. Any splenic complication from acute pancreatitis can have catastrophic sequelae, and should be closely followed with imaging studies.<sup>3</sup> In most instances, this condition necessitates surgical intervention, which may include splenectomy or distal pancreatectomy.<sup>4</sup> If surgery is not an option, percutaneous drainage of the pseudocyst is a reasonable approach.<sup>2</sup> Resolution of the pseudocyst without surgical or percutaneous intervention is rare.

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## References

1. Hastings OM, Jain KM, Khademi M, Lazaro EJ. Intrasplenic pancreatic pseudocyst complicating severe acute pancreatitis. *Am J Gastroenterol.* 1978;69(2):182–6.
2. Fung HY1, Chiu HH, Li JH, Huang CC. Pancreatic tail pseudocyst associated with spontaneous resolution of intrasplenic pancreatic pseudocyst. *Am J Surg.* 2009;197(5):e46–7.
3. Hokama A, Maeda K, Tomiyama R, et al. Intrasplenic pancreatic pseudocysts. *JOP.* 2004;5(4):235–6.
4. Slater G, Burrows L, Rudick J. Pseudocysts of the pancreas involving the spleen. *Am Surg.* 1982(7);48:324–325.

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