Journal of Gastrointestinal Surgery (2019) 23:2063–2064
https://doi.org/10.1007/s11605-019-04121-3

GI IMAGE

Spontaneous Gastric Decompression of Walled-Off Pancreatic Necrosis

Sonia Cohen[1] · David G. Forcione[2] · Peter J. Fagenholz[3]

Received: 2 April 2018 / Accepted: 13 January 2019 / Published online: 7 February 2019

Keywords Acute pancreatitis · Pancreatic necrosis

Pancreatic necrosis complicates about 20% of cases of acute pancreatitis. Pancreatic necrosis may resolve spontaneously or coalesce into a discrete collection of walled-off pancreatic necrosis (WOPN).[1] Infection of WOPN is usually thought to occur due to either bacterial translocation from the gastrointestinal tract without gross erosion, or by direct fistulization of the WOPN into the gastrointestinal tract. Gastrointestinal fistula formation is therefore thought to be one of the most serious complications of WOPN and has been associated with worse clinical outcomes. Fistulization to the stomach, small bowel, and colon has all been described. Historically, most studies have suggested that the majority of patients with infected WOPN require some form of intervention for resolution of their infection. Case reports suggest that fistulization of WOPN to the GI tract can result in complications such as bleeding, obstruction, and death. In contrast to the spontaneous decompression of pancreatic pseudocysts, WOPN might be thought to be less likely to resolve completely without intervention due to the solid component of the collection.

Recent interest in a "step-up" approach for the treatment of necrotizing pancreatitis has introduced the concept that the clinical course of the patient should dictate the therapeutic approach.[2] This multidisciplinary and staged approach has shown a substantial improvement in outcomes by reserving intervention until clinically necessary, and by utilizing the least invasive approach possible. Thus, in the "step-up" approach, patients who develop WOPN can be observed until clinical deterioration, at which point percutaneous or endoscopic drainage can be attempted. Necrosectomy (either endoscopic or surgical) is reserved for those patients for whom drainage is not sufficient for clinical improvement. Utilizing this approach in our institution, we have now encountered several cases of resolution of WOPN via spontaneous decompression into the stomach resulting in complete clinical improvement without intervention, one of which is presented here:

A 46-year-old female presented with severe acute pancreatitis and pancreatic necrosis on imaging. She required no intervention other than nasojejunal tube feedings. Repeat CT obtained as an outpatient 5 weeks later due to persistent nausea and epigastric pain showed air within WOPN (Fig. 1), suggesting infection. She was prescribed amoxicillin/potassium clavulanate with significant improvement in her symptoms. Upper endoscopy 9 days later showed proximal gastric wall thickening with a mucosal defect draining purulent fluid suggestive of spontaneous fistulization (Fig. 2). EUS did not identify a drainable area of WOPN and no intervention was performed. Repeat CT scan confirmed an interval

Fig. 1 WOPN containing air in a patient with persistent nausea and epigastric pain 5 weeks after presentation with acute pancreatitis suggests infection or fistulization to GI tract

✉ Peter J. Fagenholz
pfagenholz@mgh.harvard.edu

[1] Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY, USA

[2] Center for Advanced Therapeutic Endoscopy, Boca Raton Regional Medical Center, Boca Raton, FL, USA

[3] Harvard Medical School, Boston, MA, USA

Fig. 2 Fistula tract to stomach suggested by thickening of the gastric wall and small mucosal defect draining purulent fluid seen during endoscopy

Fig. 3 Repeat CT scan after resolution of symptoms without intervention showed an interval decrease in the size of the WOPN

decrease in the size of the WOPN from 8 to 4.8 cm (Fig. 3). Antibiotics were discontinued and her symptoms fully resolved.

Cases such as this reinforce the idea that the clinical course of patients with WOPN should dictate the need for any intervention. As demonstrated here, even fistulization to the GI tract can potentially lead to resolution of symptoms rather than complications, and the "step-up" approach to patients with WOPN can limit the morbidity of intervention to those individuals in which the clinical course of disease dictates its necessity.

References

1. Banks, P.A., et al., *Classification of acute pancreatitis–2012: revision of the Atlanta classification and definitions by international consensus.* Gut, 2013. **62**(1): p. 102–11.
2. Manrai, M., et al., *Outcome of Acute Pancreatic and Peripancreatic Collections Occurring in Patients With Acute Pancreatitis.* Ann Surg, 2018. **267**(2): p. 357–363.