Spontaneous duodenal fistulisation from walled-off pancreatic necrosis

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DESCRIPTION

Walled-off pancreatic necrosis (WOPN) is a known complication of pancreatitis. It can be complicated by infection, haemorrhage and, rarely, fistulisation. Here we present a rare case of WOPN with duodenal fistulisation.

A woman with medical history of type 2 diabetes mellitus, hypothyroidism, chronic kidney disease, morbid obesity (body mass index of 60) and heart failure presented to the emergency room with new-onset abdominal pain. She described the pain as sharp in nature, epigastric in location, 10/10 in severity, non-radiating as well as associated with nausea and vomiting. Of note, the patient was previously admitted to our hospital, approximately 6 weeks earlier, with similar symptomatology and diagnosed with diabetic ketoacidosis and acute pancreatitis. The patient was afebrile and tachycardic with other vital signs normal. Physical examination revealed a diffusely tender abdomen to palpation, limited by morbid obesity. Significant laboratory values included a white cell count of 9400/mm³, creatinine of 1.73 mg/dL, glucose of 276 mg/dL, albumin of 3.1 g/dL, erythrocyte sedimentation rate of 120 mm/hour and lipase of 78 U/L. No signs of systemic illness were identified. CT scan of the abdomen showed a 10.6×6.8×9.5 cm region of WOPN (figure 1). It also revealed WOPN extending into the small bowel wall at the junction between the fourth portion of the duodenum and the ligament of Treitz (figure 1). Given mild symptomatology and low suspicion for infection, the patient was treated with conservative therapy

Figure 1 CT scan of the abdomen in the transverse view demonstrates a 10.6×6.8×9.5 cm region of walled-off pancreatic necrosis indicated by the red arrow. The fistula tract between the walled-off pancreatic necrosis and small bowel is indicated by the dashed white arrows.

Figure 2 Follow-up CT scan of the abdomen in the transverse view showing complete resolution of the walled-off pancreatic necrosis with marked improvement in peripancreatic inflammatory changes.

with no empiric antibiotics. Over the course of the next few weeks, the patient had marked improvement in abdominal swelling with resolution noted on follow-up clinic evaluation. A repeat CT of the abdomen obtained 3 months later showed resolution of the WOPN as seen in figure 2.

Patient's perspective

I am thankful for the care received and even more so with the need to not have to undergo surgical procedure for my fluid collection. I am more than happy to share my case with the medicine community if it will be providing learning opportunity. Kindly reach out to me after the acceptance of the article.

Learning points

- ▶ Patients presenting with abdominal pain who previously had a confirmed diagnosis of pancreatitis within the last 4 weeks should raise the triaging clinician's suspicion for walled-off pancreatic necrosis or a developing pancreatic fluid collection.
- ▶ Additionally, this case reinforces those enteric fistulae can be managed conservatively, if not infected, by allowing drainage into the bowel.
- ▶ Endoscopic intervention should only be considered in cases refractory to conservative therapy or if the patient demonstrates any clinical deterioration such as infection.

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WOPN is a significant complication of pancreatitis that occurs in approximately 15% of patients and typically within 4 weeks from the inciting inflammatory episode.^{1–3} It is defined as a heterogenous encapsulation of pancreatic and/or peripancreatic necrotic tissue with subsequent liquefaction.^{2–4} Most patients with WOPN are symptomatic, usually presenting with abdominal distention or pain, nausea, vomiting or jaundice. When infected, patients present with severe abdominal pain, fever and other signs of sepsis. Enteric fistulae are a rare complication of pseudocysts and, when present, typically occur at the transverse colon or splenic flexure.^{2–5} Duodenal fistulisation of WOPN is extremely rare, with few cases reported, and mainly result after superimposed infection of necrotic pancreatic material.^{4–6} This case reinforces those enteric fistulae can be managed conservatively, if not infected, allowing drainage into the bowel. Endoscopic intervention should only be considered in cases refractory to conservative therapy or if the patient demonstrates any clinical deterioration such as infection. This approach of minimal intervention and step-up approach has been shown to have lower complications and mortality.⁷

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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