



## CLINICAL IMAGES

### An alcoholic's series of unfortunate events

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We present a case of spontaneous decompression of a pancreatic pseudocyst into the stomach following endovascular embolisation in an alcoholic patient. To our knowledge this is the first description of this sequence of events.

A 42-year-old man, known to be an alcoholic, presented with acute severe epigastric pain and vomiting. He was moderately dehydrated, had epigastric tenderness and had an elevated serum amylase level (760 IU/l). Oral intake was restricted and nasogastric decompression applied for acute pancreatitis. He returned 7 weeks after discharge with recurrent pancreatitis and epigastric swelling. A computed tomography (CT) scan (Fig. 1) demonstrated a moderately large pancreatic pseudocyst.

A bout of haematemesis prompted coeliac axis angiography (Fig. 2), which revealed a pseudo-aneurysm off a branch of the left gastric artery (LGA). Micro-coil embolisation (Fig. 3) was undertaken to occlude the LGA and its branch with the pseudo-aneurysm.

The epigastric swelling subsided but the pain persisted. At endoscopy (Fig. 4) a circular defect on the greater curve of the stomach representing a spontaneous cystgastrostomy, was noted (Figs 4a - c). This was probably due to local ischaemia from the embolisation, with resultant spontaneous decompression of the pseudocyst through a cyst-trans-gastric drainage. The epigastric pain symptoms subsided and the patient remained well after 6 months of sobriety.

### Discussion

Peripancreatic aneurysms and pseudo-aneurysms are rare but potentially devastating complications of pancreatitis, with a reported incidence between 1.3%<sup>1</sup> and 10%.<sup>2</sup> Severe pancreatic

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*Professor Thomson is a specialist surgical gastro-enterologist at Addington Hospital, Durban, who is still looking for an interventional radiologist who will stay in the academic state sector.*

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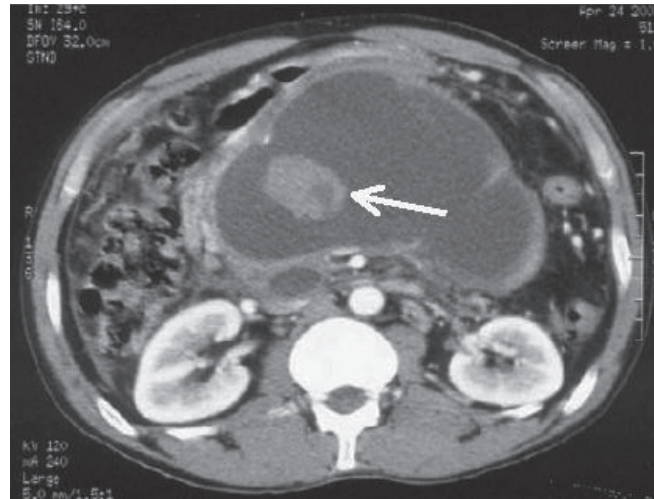


Fig. 1. Axial CT scan image, demonstrating a moderately large pancreatic pseudocyst with peripancreatic stranding and intracystic blush (arrow) in keeping with haemorrhage.

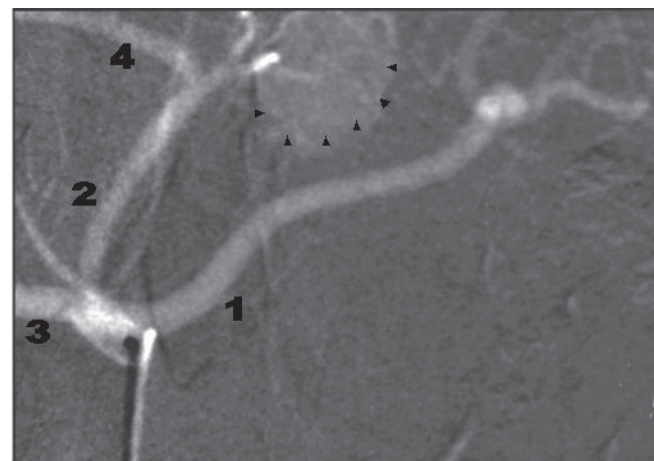


Fig. 2. Coeliac axis angiogram revealing pseudo-aneurysm (arrowheads) off a branch of the left gastric artery. Anomalous left hepatic artery noted arising from the LGA, which is a normal variant (1 = splenic, 2 = left gastric (LGA), 3 = common hepatic, 4 = replaced left hepatic artery).

necrosis and peripancreatic inflammatory response in the acute phase of pancreatitis lead to leakage of proteolytic enzymes, which damage the walls of subjacent vascular structures. In the subacute or chronic phases, pancreatic abscess or pseudocyst formation may also predispose to vessel mural erosion due to compression or the elastolytic enzymatic secretions contained within these collections.<sup>3</sup> Patients may have sudden exacerbation of abdominal pain and distension



Fig. 3. Completion post-embolisation coeliac axis angiogram showing the coils in position (arrow) and that the pseudo-aneurysm has been embolised.

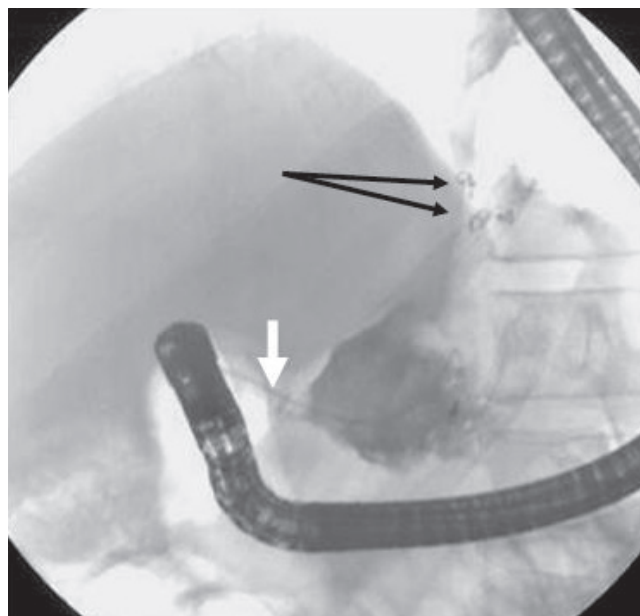


Fig. 4b. An opening in the juxtapyloric area is cannulated using a guidewire as would be done during ERCP and contrast is introduced, filling the cyst (white arrow = microcatheter through the opening to the cyst, black arrow = embolisation coils).

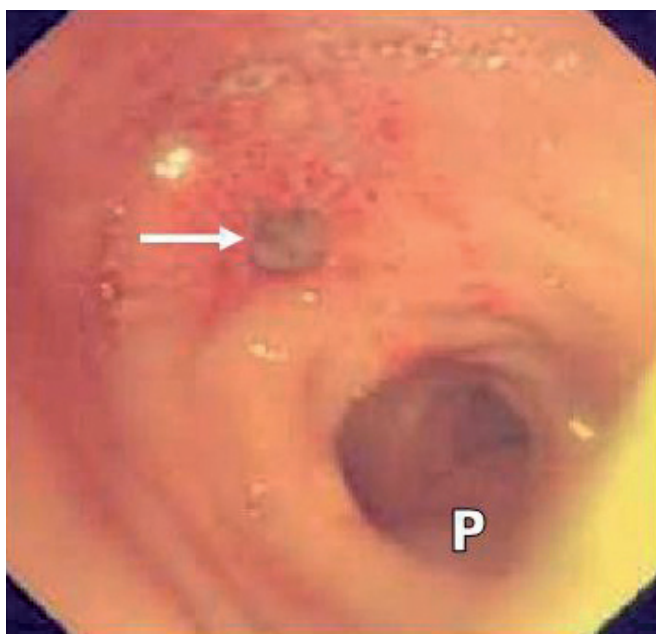


Fig. 4a. Endoscopic image demonstrating a juxta-pyloric greater curve opening (arrow) (P = pylorus).

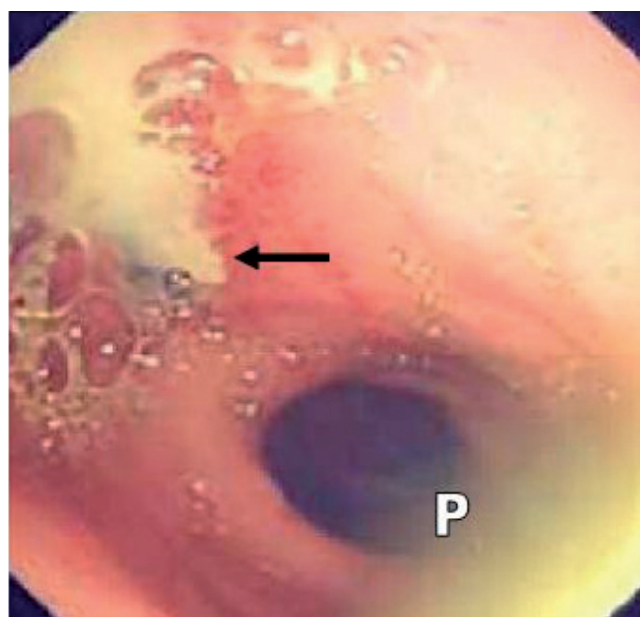


Fig. 4c. Endoscopic image reveals pancreatic secretions (arrow) emanating from the opening after removal of the catheter (P = pylorus).

due to acute haemorrhage, which may be fatal in up to 7.5% of cases,<sup>4</sup> or ongoing haematemesis and melaena indicating slow intermittent blood loss.<sup>5</sup>

Multidetector CT scanning of the abdomen, before and after intravenous contrast administration, is the initial investigation of choice. Contrast enhancement or a blush in relation to a peripancreatic vessel or pseudocyst, as in this patient, indicates an underlying aneurysm.<sup>1</sup>

Catheter angiography is the gold standard for identifying these aneurysms. The vessels involved are the splenic, gastroduodenal, gastro-epiploic and intrapancreatic branches.<sup>6</sup> Visceral aneurysms have been classified in terms of their

haemodynamics and management approaches devised.<sup>7</sup> If deemed amenable to transcatheter embolisation, the vessel may be occluded. Usually only one artery is involved but synchronous false aneurysms may be successfully embolised.<sup>8</sup> Embolisation is also the first line of treatment in pseudocyst-associated aneurysms,<sup>9</sup> as in our patient. Other options include the use of stent-grafts and percutaneous guided intra-



aneurysmal injection of thrombin.<sup>7</sup> Initial high rebleed rates following embolisation have markedly improved over the last decade, largely owing to improved micro-catheter design and embolic agents,<sup>6</sup> establishing embolotherapy as the first-line management in patients with haemosuccus pancreaticus due to false aneurysms.

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