Clinical picture

Emphysematous pancreatitis: a severe complication of acute pancreatitis

A 65-year-old male patient presented to the accident and emergency department with generalized upper abdominal pain. Blood tests showed a raised amylase of 1811 IU/l and elevated inflammatory markers (C-reactive protein = 126 mg/l). The patient was found to have a profound metabolic acidosis with a base excess of –16. Also of note was a history of severe alcohol excess. A differential diagnosis was made clinically of pancreatitis or ischaemic bowel and a computed tomography (CT) scan of the abdomen was requested. Contrast enhanced multidetector CT scan showed the entire pancreatic bed to have been replaced by gas [Figure 1; gas is seen within the pancreatic bed (thin arrows), within the portal vein (thick arrow), within the gallbladder wall (arrowheads) and free intraperitoneal gas (asterix)]. Gas was also seen within the portal venous system and extending into other visceral structures including the gallbladder. Features were consistent with severe emphysematous pancreatitis. This case demonstrates extremely severe features and despite fluid and anti-microbial treatment, the patient died shortly after the scan was performed.

Emphysematous pancreatitis is a rare complication of pancreatitis but carries a high mortality rate. Gas-forming organisms from the bowel may enter the pancreas to cause emphysematous pancreatitis. Typical routes of entry include haematogenous and lymphatic spread, as well as direct invasion from reflux through the ampulla of Vater, or transmural passage from the adjacent transverse colon. Gas within the pancreas may also occur through other processes and is not in itself indicative of infection, for example, following endoscopic instrumentation or sphincterotomy. The prognosis of emphysematous pancreatitis is extremely poor and early radiological detection may influence survival. Although some features may be apparent on plain films, for example, a mottled gas pattern in the mid-abdomen, this finding is non-specific and CT is the modality of choice for investigating this condition. CT readily shows gas within the pancreatic bed, the extent of which can be assessed as well as any further complications.

Management of emphysematous pancreatitis consists of fluid resuscitation and anti-microbial therapy to control septic shock. Depending on the clinical condition surgical debridement or percutaneous drainage may also be possible.

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References