Aortogastric fistula secondary to pancreatitis

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INTRODUCTION

Primary aortogastric fistulas are rare and usually associated with aortic aneurysms. We report a primary aortogastric fistula of unusual aetiology.

CASE HISTORY

A 68-year-old woman was admitted with acute pancreatitis (Glasgow Score two). She was treated with intravenous fluids and antibiotics. Abdominal CT showed small bilateral pleural effusions and a large hiatus hernia but was otherwise unremarkable. Her recovery was uneventful and she was discharged after twelve days.

She was readmitted two weeks later with breathlessness and new onset atrial fibrillation. At this point she had mild epigastric pain and raised inflammatory markers. A repeat abdominal CT showed a fluid collection adjacent to the hiatus hernia in the posterior mediastinum (Figure 1). Total parenteral nutrition was commenced and the plan was to drain the collection.

A few days later she developed severe epigastric pain followed by episodes of melaena, haematemesis and hypotension. She remained hypotensive despite vigorous fluid resuscitation and blood transfusion. Urgent upper gastrointestinal endoscopy was performed. The view was poor due to fresh blood and clots in the oesophagus and it was not possible to enter the stomach.

At emergency laparotomy two litres of infected fluid was aspirated from a pancreatic pseudocyst. Two-thirds of the stomach had herniated into the chest and was irreducible. Gastrostomy revealed fresh blood and clots in the intrathoracic stomach. An arterial bleeding point was identified within the stomach overlying the thoracic aorta. Attempts to stop the bleeding were unsuccessful and the patient died. A post mortem showed a fistula between the thoracic aorta and the intrathoracic stomach.

DISCUSSION

Aortoenteric fistulas are uncommon and are frequently fatal. Most are secondary fistulas occurring after aortic replacement. Primary aortoenteric fistulas are very rare and

Figure 1 CT scan showing the close relationship of the thoracic aorta [A], pancreatic pseudocyst [P] and hiatus hernia [H]

are due to spontaneous erosion of the aorta into the gastrointestinal tract. The incidence of primary aortoenteric fistulas is reported at about 0.07% of the general population. The male to female ratio is 3:1 and the mean age of affected people is 64 years.¹

A recent review revealed that 83% of patients with a primary aortoenteric fistula have an associated aortic aneurysm.¹ Other reported causes include infection, tumour, radiotherapy, pancreatic cancer and peptic ulcer disease.²

Primary aortoenteric fistulas can affect any part of the gastrointestinal tract. They are most common in the third or fourth part of the duodenum, with fistulae in these regions accounting for 54% of all cases.^{1–3} Aortogastric fistulas account for 2% of fistulas.

Upper gastrointestinal bleeding is the most common presentation of aortoenteric fistulas. Melaena occurs in 40–55% of cases and haematemesis in 64%.⁴ There is often a 'herald bleed' followed by massive exsanguination. In 11% of cases there is a triad of abdominal pain, gastrointestinal haemorrhage and a palpable abdominal mass.¹ In others the main symptom is fever.⁴

In a stable patient with an aortoenteric fistula it may be possible to use a covered aortic stent graft to obtain haemostasis. Endovascular repair has an increasing role in the treatment of aortic disease; it is minimally invasive and useful for patients with other morbid factors. Stent graft implantation has successfully been used to treat aortic aneurysms, dissections, to control bleeding from aorto-ureteric fistulas and in aortic trauma.^{5,6}

Pancreatic pseudocysts are a recognized complication of pancreatitis. They commonly occur after two weeks. A pseudocyst is a collection of pancreatic enzymes, inflammatory exudate and necrotic debris. It is thought that a combination of fat necrosis and the spillage of pancreatic enzymes into the mediastinum contributed to the fistula formation in this patient.

This is a remarkable case due to the rare location of the fistula and the lack of an associated aortic aneurysm. A search of the English literature reveals it is the first report of an aortogastric fistula secondary to pancreatitis.

Competing interests None declared.

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