

SHORT REPORT**Giant pseudo-Aneurysm of the Pancreatico-Duodenal Artery****R. Montisci*, R. Sanfilippo, C. Sionis, M. Ibba and G. Brotzu***Vascular and Thoracic Surgery, Policlinico Universitario, Università degli Studi di Cagliari, Cagliari, Italy**Key Words: Visceral aneurysm; Splanchnic aneurysm; Pancreatico-duodenal pseudoaneurysm.***Introduction**

Peripancreatic pseudo-aneurysms are a relatively frequent condition. A 10% incidence is reported in patients suffering from chronic pancreatitis.^{1–2} Trauma and infection are less frequent causes of false aneurysm in that area. The artery most frequently involved is the splenic artery (45%) followed by the gastro-duodenal artery (17%) and the pancreatico-duodenal artery (11%).³ We report a case of a giant pseudo-aneurysm of the pancreatico-duodenal artery in a patient with no history of pancreatitis or trauma.

Case Report

A 60-year-old woman was admitted to a peripheral hospital because of epigastric and periumbilical pain. She underwent an abdominal CT Scan (Fig. 1) which showed a large mass about 11.5 × 8 cm² in size localised under the liver and anterior to the pancreas with hypo-dense and non-homogeneous content and with a smooth surface. It was partially calcified, with contrast enhancement except in two peripheral areas. A diagnosis of hepatic artery aneurysm was made and the patient was transferred to our department. There was no history of trauma or gallstones or alcohol abuse and the patient had not undergone any previous surgery. Laboratory tests including amylases and alkaline phosphatase were normal. The patient was an insulin dependent diabetic and hyper-tensive. Physical examination revealed a mobile and tender

pulsating mass in the epigastrium. The patient underwent selective angiography of the celiac axis with an additional superselective injection into the gastro-duodenal artery which showed pulsatile filling of the mass (Fig. 2). This led to the diagnosis of a pseudo-aneurysm. At the same time the pancreatico-duodenal artery was embolised with two Gianturco spirals (Fig. 3) and with cyanoacrylat solution (Histoacryl[®]).

A followup CT scan showed complete thrombosis of the pseudo-aneurysm. In spite of the good result, a decision was made to excise the mass surgically because of the size of the mass, the infection risk, and the fact that the patient still complained of abdominal pain. Through a midline laparotomy, a dissecting plane between the mass, the abdominal organs and the retro-peritoneum, devoid of adhesions



Fig. 1. CT scan with contrast enhancement showing the large mass anterior to the pancreas.

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Fig. 2. Selective angiography showing the profile of the mass and the site of filling (central arrow).

or fibrosis, was identified. The mass was attached to the head of the pancreas. The vascular pedicle—the anterior superior pancreatico-duodenal artery—was ligated and cut allowing easy removal of the whole mass which turned out to be a false aneurysm (Fig. 4). The wound was closed over a drain which was removed on the 4th postoperative day. The patient underwent an uneventful recovery and was discharged on the 7th postoperative day. Histology of the mass showed a fibrotic wall with pancreatic tissue islands and this suggested a concurrent diagnosis of pancreatic pseudo-cyst.

A year after the operation, the patient is well and there are no signs of recurrence.

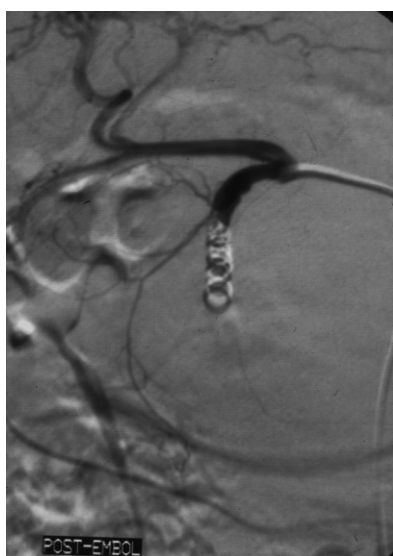


Fig. 3. Post embolisation selective angiography.

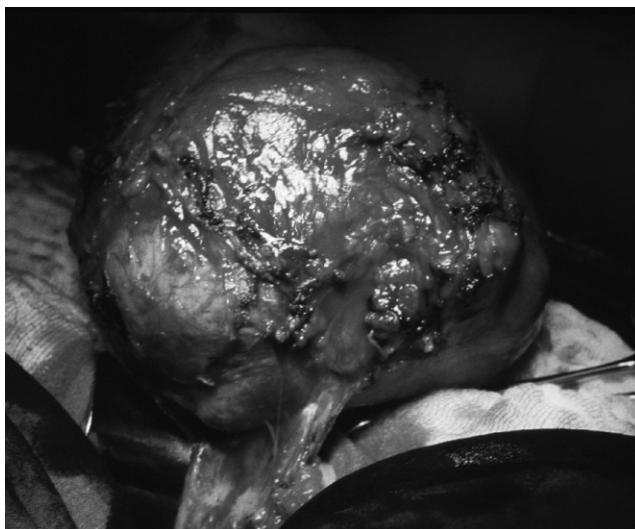


Fig. 4. The mass is removed from the abdomen.

Discussion

Pseudo-aneurysm formation in the gastro-duodenal or pancreatico-duodenal arteries in patients with chronic pancreatitis is not a particularly unusual event. Lesions originate from the erosion of an artery inside a pancreatic pseudo-cyst by enzymes, mainly elastases, released from the pancreas.⁴⁻⁶ In the case reported there was no history or physical evidence of chronic pancreatitis. Nevertheless, histological examination of the aneurysm wall suggested a pseudo-aneurysm developing inside a pseudo-cyst, and the size of the aneurysm also supports this view. It was this size together with the danger of imminent rupture that led to our decision to carry out an embolisation, which is rapidly becoming the first line of treatment of splanchnic aneurysms.⁷ This relatively simple procedure drastically reduces the risk of bleeding and simplifies the treatment of surgically inaccessible lesions⁸ and lesions with an inflammatory component.^{9,10} About 50% of pseudo-aneurysms eventually rupture with major haemorrhage into the retro-peritoneum, peritoneal cavity or intestinal lumen.⁶

Persisting pain was the main indication for subsequent surgery. Splanchnic aneurysms rarely exceed 5 cm in diameter, although Preda did describe a giant pseudo-aneurysm of the gastro-duodenal artery measuring 7 cm.¹¹ Savadeur described a hepatic artery pseudo-aneurysm measuring 11 cm.¹² The size of the pancreatico-duodenal artery pseudo-aneurysm that we describe here has to be considered exceptional.

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