SHORT REPORT

Giant pseudo-Aneurysm of the Pancreatico-Duodenal Artery

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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 pseudoaneurysm. 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

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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 dis-
charged 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.

**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.\textsuperscript{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.\textsuperscript{7} This relatively simple procedure drasti-
cally reduces the risk of bleeding and simplifies the
treatment of surgically inaccessible lesions\textsuperscript{8} and lesions
with an inflammatory component.\textsuperscript{9,10} About 50% of
pseudo-aneurysms eventually rupture with major
haemorrhage into the retro-peritoneum, peritoneal
cavity or intestinal lumen.\textsuperscript{6}

Persisting pain was the main indication for sub-
sequent 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.\textsuperscript{11} Savadeur described a hepatic artery
pseudo-aneurysm measuring 11 cm.\textsuperscript{12} The size of the
pancreatico-duodenal artery pseudo-aneurysm that
we describe here has to be considered exceptional.
References