SHORT REPORT

Aneurysms of the Coeliac Trunk: a Case Report

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Aneurysms of the coeliac axis are rare. Up to 1997 only 137 cases had been reported. A case of CAA in a 46-year-old woman is reported. The patient complained of epigastric pain and the aneurysm was diagnosed by abdominal ultrasonography, three-dimensional CT angiography and intra-arterial DSA. Aneurysmectomy, ligation of the splenic and left gastric artery, splenectomy and direct anastomosis of the common hepatic artery to the coeliac remnant was performed trans-abdominally. A postoperative CT angiogram showed normal arterial flow. Postoperative recovery was uneventful.

Key Words: Coeliac artery aneurysm; Coeliac trunk aneurysm; Splanchnic artery aneurysm.

Introduction

Aneurysms of the coeliac artery are unusual lesions that account for 4% of all splanchnic aneurysms.¹² Up until 1997 only 137 cases had been described in the literature,³⁻¹⁰ since when a further four patients have been reported.¹⁰⁻¹² We present here a coeliac artery aneurysm (CAA) which involved the origin of the splenic, left gastric and common hepatic arteries.

Case Report

A 46-year-old woman was admitted to our surgical unit complaining of a month's history of epigastric pain and nausea. She had a past history of peptic ulceration. On upper abdominal ultrasonography a 2.5 cm diameter aneurysm of the coeliac artery was detected.

The CT showed an aneurysm of the coeliac artery, diameter 2.5 × 2.6 cm, dilatation (1.2 cm) and kinking of the splenic artery and dilatation of the aorta (3 cm) below the renal arteries (Fig. 1). The common hepatic and left gastric arteries were normal.

The intra-arterial DSA showed a 2.5 cm diameter aneurysm of the coeliac axis involving the splenic artery. Lateral views revealed the initial 1 cm of the coeliac axis origin to be normal (Fig. 2). There was also an aneurysm of the left renal artery.

Aneurysmectomy, ligation of the splenic and left gastric artery, splenectomy and direct end-to-end anastomosis of the common hepatic artery to the coeliac remnant was performed trans-abdominally.

Histology of the aneurysm sac revealed medial degeneration with loss of elasticity.

A postoperative CT angiogram showed normal arterial flow. Postoperative recovery was uneventful.

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Discussion

Aneurysms of the coeliac trunk are the rarest form of aneurysms of the visceral arteries. Graham et al. reviewed 108 cases of coeliac artery aneurysms occurring between 1745 and 1984. Since 1958 when Schumaker reported the first case to be successfully treated surgically, only 72 cases have been reported in the international literature.

Atherosclerotic and medial degeneration were the most common pathologic changes observed. A pre-existing reduction of elastic tissue and smooth muscle at major bifurcations appears to be a contributing factor. Traumatic or mycotic coeliac artery aneurysms are very rare.

Associated aortic aneurysms were noted in 18% of patients with CAA and other splanchnic artery aneurysms affected 30% of these patients. Most patients with CAA are asymptomatic and the aneurysm is detected incidentally on ultrasonography or CT examination carried out during the investigation of other disorders. Abdominal discomfort localized to the epigastrium accompanies more than 60% of symptomatic coeliac aneurysms.

The most serious clinical complication of CAA is rupture, most often associated with intraoperative haemorrhage, although communication with the gastrointestinal tract can occur. The documented risk of rupture is 13%. Surgical treatment of coeliac aneurysms is recommended, except when the general condition of the patient contraindicates reconstruction. Arterial reconstruction includes either primary reanastomosis of the coeliac artery trunk, in the presence of a relative normal proximal coeliac axis, or aorto-coeliac bypass with a synthetic prosthesis or autogenous vein graft.

The operative mortality for patients with ruptured CAA is 40%. Prophylactic operative treatment is successful in 90% of cases with an associated mortality rate of 5–15%.

References