

# Aneurysm of the splenic artery — a controversial entity

## A case report

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### Summary

The case of an asymptomatic, calcified, arteriosclerotic, intact splenic artery aneurysm in a 60-year-old woman is presented. The diagnosis was confirmed by selective coeliac arteriography and the aneurysm was successfully resected with preservation of the spleen.

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Aneurysms of the splenic artery have frequently been reported in autopsy<sup>1,2</sup> and radiological studies.<sup>3,4</sup> Approximately 10% of all splenic artery aneurysms rupture, with catastrophic haemorrhage and an unacceptable mortality.<sup>5</sup> Although controversy persists as to the management of the asymptomatic patient when splenic artery aneurysm is found by chance, some workers regard the demonstration of such an aneurysm, regardless of size, an indication for elective resection, provided the general health of the patient permits a laparotomy.<sup>6</sup> The manifestations and methods of diagnosis of splenic artery aneurysms have been extensively reviewed in previous publications,<sup>7-9</sup> this communication reports the successful elective resection of a non-ruptured, calcified splenic artery aneurysm.

### Case report

A 60-year-old White woman was admitted to Tygerberg Hospital with a 9-month history of anorexia, weight loss and depression.

Examination revealed a healthy middle-aged woman with a blood pressure of 170/70 mmHg, a pulse rate of 112/min and a haemoglobin level of 13,5 g/dl. The findings on physical examination were normal; no abdominal mass could be palpated nor was a bruit audible.

Laboratory investigations showed a normal haematological profile, and results of liver function tests and estimations of electrolytes, urea, plasma glucose and serum amylase values were within normal limits.

A calcified lesion of the left upper quadrant was noted on her abdominal radiograph. A barium meal examination, gastroscopy, a liver and spleen scan (<sup>99m</sup>Tc) and ultrasound investigation of the abdomen were negative.

An abdominal aortogram and a coeliac arteriogram revealed a splenic artery aneurysm measuring approximately 3 cm in diameter.

At elective laparotomy, a calcified non-ruptured aneurysm of the splenic artery embedded in the tail of the pancreas and situated 5 cm from the hilum of the spleen was confirmed. The liver, spleen, kidneys, stomach, pancreas and gut were normal. Aneurysmectomy and ligation of the splenic artery with preservation of the spleen was performed. The aneurysm measured 2,5 x 2 cm and there were no signs of thrombosis. The postoperative course was uneventful and the patient was discharged on the 10th postoperative day.

Histologically, the aneurysm showed an entirely calcified wall.

### Discussion

The diagnosis of uncomplicated splenic artery aneurysms is made by X-ray examination at surgery or on autopsy.<sup>1-4</sup> Splenic artery aneurysms should be considered in patients presenting with nonspecific upper abdominal pain with an annular calcification in the left upper quadrant of the abdomen on the radiograph, as in the patient described.<sup>3,10</sup> The diagnosis is confirmed by selective coeliac arteriography.<sup>11</sup>

Surgery is indicated in all patients with symptomatic aneurysms of the splenic artery and when rupture has occurred.<sup>9</sup> Although it is agreed that surgery is required in symptomatic patients, controversy persists as to the management of the asymptomatic patient. Some workers maintain that diagnosis of splenic artery aneurysm in itself is not an indication for surgery.<sup>6,12</sup> Indications for resection include aneurysms in women of childbearing age, symptomatic aneurysms, asymptomatic non-calcified aneurysms in patients less than 60 years of age with hypertension, aneurysms greater than 1,5 cm in diameter, radiological signs of enlargement<sup>6</sup> and ruptured aneurysms.<sup>9,10</sup> Others suggest expectant treatment for aneurysms less than 3 cm in diameter in asymptomatic patients older than 60 years.<sup>6</sup>

The generally accepted surgical treatment of splenic artery aneurysms includes proximal and distal ligation of the splenic artery, aneurysmectomy with or without splenectomy depending on the site of the aneurysm.

In high-risk patients, non-surgical transcatheter obliteration of the splenic artery aneurysm has recently been reported as a useful alternative to surgical treatment.<sup>5</sup>

It is important to realize that aneurysmal calcification, normotension, and age over 60 years do not preclude rupture of splenic artery aneurysms. Indeed, the hazards and mortality associated with rupture of splenic artery aneurysms are formidable.<sup>13</sup> If the elective surgical treatment of bland splenic artery aneurysms is to be justified, the operative mortality should not be greater than 1%.<sup>14</sup>

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