

CASE REPORT

Giant aneurysm of the splenic artery

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Abstract

Splenic artery aneurysms (SAA) are one of the common visceral aneurysms. However giant SAA have barely been reported. We discuss a case of SAA, who had prior history of caroli disease at the stage of secondary biliary cirrhosis for which he was a candidate for liver transplantation. The patient underwent open surgical repair. The proximal and distal splenic artery were ligated from within the aneurysm and surgery was completed with splenectomy. The post operative period was uneventful.

Introduction

An aneurysm is a localized abnormal dilation of a blood vessel.¹ Any artery can be affected by a true or a pseudoaneurysm. In true aneurysm, the aneurysmal wall is composed of all the 3 layers, that is, the intima, media and adventitia. Whereas in a pseudoaneurysm there is a breach in vessel wall along with an extra vascular hematoma bounded by surrounding tissue. The most common site of intra abdominal aneurysm is the abdominal aorta followed by iliac arteries and then splenic artery.² Aneurysms in visceral arteries are rare and splenic artery is the commonest site, being affected in 60% of cases.³ True aneurysms of splenic artery seldom exceed 3 cm in size and giant splenic artery aneurysms (more than 10 cm in size) are extremely rare.⁴ These aneurysms may be complicated by rupture in 2-10% of cases but risk of rupture in giant aneurysms is as high as 28% with mortality approaching 40%. Early definitive surgical intervention is cornerstone in management.

Case Study

The case was a 37-year-old patient with a prior history of Caroli disease, which was waiting for liver

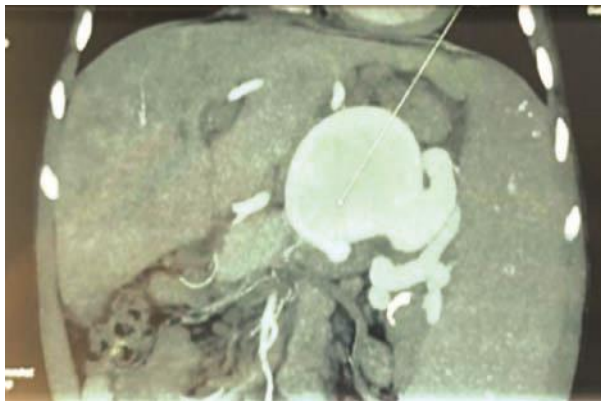


Figure 1 : Angioscan of the abdomen (cross section) showing a 10cm aneurysm of the splenic artery

transplantation. During a regular medical checkup, a throbbing mass of the left upper quadrant of the abdomen was found. A triple contrast computed tomography (CT) scan of the abdomen showed a 10 cm aneurysm originating from the medial third of the splenic artery (Figure 1). Preoperative investigations were otherwise unremarkable. There were no concomitant aneurysms.

The patient underwent surgery electively for treatment of this lesion. From an anterior approach through a midline incision, the opening of the lesser omental sac through the gastrocolic ligament revealed the 10-cm Splenic artery aneurysms (SAA). After careful dissection of the vascular structures, the normal proximal and the distal splenic artery was isolated for vascular control (Figure 2).

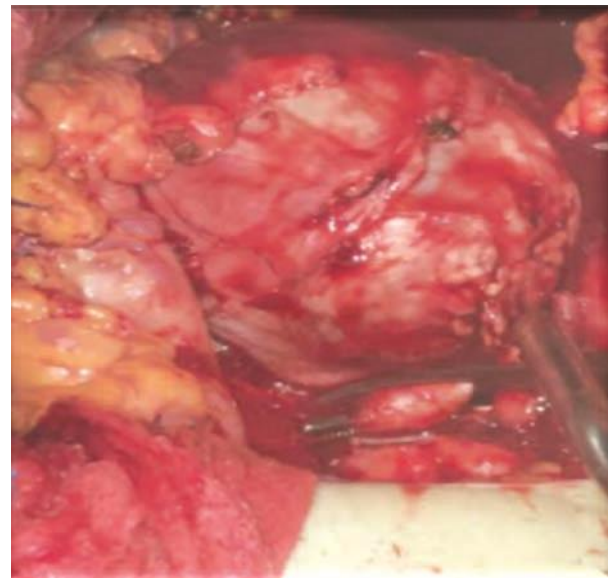


Figure 2 : Intraoperative view of the giant aneurysm of the splenic artery

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They were ligated from within the aneurysm. An aneurysmectomy was performed. The spleen was poorly vascularized and removal was decided. The pathologic analysis of the aneurysmal wall was consistent with a true aneurysm. During postoperative recovery, the patient developed ascites due to his cirrhosis that was managed with diuretics. He was discharged on postoperative day 10 and continues to be well at the 6-month follow-up.

Discussion Although SAAs are considered as a common visceral aneurysm, giant SAAs remain exceptional.^{1,2} Unlike ordinary SAAs which vary in diameter between 2 to 3 cm on average giant SAAs diameter exceeds 10 cm.¹ Some of the factors of risk, as mentioned are atherosclerosis, portal hypertension, arterial fibrodysplasia and pregnancy. These giant SAAs are often located in the middle third of the splenic artery.³ The severity of abdominal pain does not appear to be related to the diameter of the aneurysm since 18 cm and 15 cm aneurysms have been reported as being asymptomatic.^{2,4}

Generally accepted indications for treatment include symptoms due to the aneurysm, documented enlargement, pregnancy or anticipation of pregnancy, portal hypertension presenting for liver transplant (as the case of this patient), and diameter >2 to 3 cm.^{1,5,6}

Three treatment options are available: conventional open surgery, endovascular treatment.⁷⁻¹⁰ More recently, laparoscopic surgery. The surgical approach for giant SAAs is challenging because the celiac trunk may be inaccessible anteriorly due to the size of the mass. For aneurysms of the middle third of the splenic artery, exclusion by ligation of

the proximal and distal splenic arteries is considered as a safer option as it is usually less associated with a complementary splenectomy. The patient gave consent to the reporting of this case.

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