SHORT REPORT

‘All That Glitters isn’t Gold’: Rupture of an Undiagnosed Splanchnic Aneurysm in the Presence of an Aortic Aneurysm

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Introduction

We present a case of a ruptured aneurysm of the left gastroepiploic artery in the presence of a known aortic aneurysm, which presented a diagnostic and management dilemma. The patient was too unfit for an emergency repair of his aortic aneurysm but underwent successful coil embolisation and thrombin injection of the splanchnic artery aneurysm. Splanchnic artery aneurysms carry a high rate of rupture and poor survival, often because of delay and difficulty in diagnosis. A high index of suspicion and radiological expertise are required for diagnosis, but early recognition may allow successful endovascular intervention and obviate the need for open surgery.

Case Report

A 65-year-old gentleman presented as an emergency with a sudden onset of abdominal and back pain associated with hypotension. On examination he was found to have a tender abdominal aortic aneurysm. The patient’s condition stabilised with fluid resuscitation and he was transferred for a CT scan with a presumed diagnosis of a ruptured abdominal aortic aneurysm (AAA).

Questioning of the patient’s family revealed a complex past medical history including mitral valve prolapse, hypertension, atrial fibrillation, subarachnoid haemorrhage, and a recent stroke which had caused a dense left hemiparesis and a requirement for PEG feeding. He had been seen in vascular outpatients and diagnosed with a 6 cm dissecting AAA extending into the left common iliac artery. The aneurysm was unsuitable for endovascular repair and he was deemed unfit for conventional surgery. It had been agreed with the family that, should the AAA rupture, he would not undergo emergency repair.

The CT scan confirmed a 7.5 cm dissecting infra-renal AAA, a 3 cm left common iliac aneurysm and a small haematoma to the right of, but not directly next to, the AAA. The source of the bleeding was not apparent. Delayed images were therefore performed, and the source of the bleeding identified as a 4.6 cm aneurysm in the region of the lesser curve, thought to be of the left gastroepiploic artery (Fig. 1). Even in retrospect this was not apparent on the initial scan. After consultation with the patient and his family, angiography was performed with a view to embolisation of the splanchnic aneurysm. Angiographic identification again proved difficult. However, the aneurysm was successfully treated by a combination of coil embolisation and thrombin injection under duplex and angiographic control (Fig. 2(a) and (b)). The patient made a rapid recovery and was discharged home 2 days later.

Discussion

Although visceral artery aneurysms are rare, they are clinically important as at least 20% present as
emergencies and 8.5% are fatal. Splenic artery aneurysms are the most common (60%) followed by aneurysms of the hepatic and superior mesenteric arteries (20 and 5.5%, respectively). In this case, it is feasible that the aneurysm represented a false aneurysm secondary to trauma from the PEG tube insertion, though it was not possible to determine this with any certainty.

Aneurysms of the gastric and gastroepiploic arteries usually present with sudden rupture and massive intraperitoneal haemorrhage. Rare presentations include haemoptysis, occult bleeding and asymptomatic incidental findings.

The mortality from rupture of a gastroepiploic artery aneurysm is very high, probably greater than 70%. This is almost certainly due to difficulty, and subsequent delay, in diagnosis. They are notoriously difficult to detect, require a high index of suspicion, and may only be confirmed at laparotomy. If the patient is haemodynamically stable, a combination of Duplex ultrasound and CT scan are appropriate. It should be noted that, as in the current case, delayed CT images may be required. Highly selective angiography may allow direct visualisation of the aneurysm, and provides the option of endovascular treatment. Again, however, angiographic detection can prove difficult and require significant expertise.

Transcatheter coil embolisation is the treatment of choice and is successful in more than 70% of cases. The risks of endovascular treatment are far lower than conventional surgery, which involves ligation of the feeding vessel, resection of the aneurysm and occasionally arterial reconstruction. If embolisation fails to exclude the aneurysm and the aneurysm is accessible, thrombin injection is feasible, as with the current case. It may also function as a stabilisation procedure providing temporary control of haemorrhage prior to conventional surgery.

In summary, the visceral artery aneurysm in this patient was not initially apparent and took a high index of suspicion to diagnose. Failure to recognise the cause, and an assumption that the collapse was secondary to a rupture of the known AAA may well have led to a far less favourable outcome. Aneurysms of the visceral vessels are a rare but important cause of mortality and morbidity. They may be difficult to diagnose, but early recognition may allow successful endovascular treatment and obviate the need for open surgery with its incumbent risks.

References


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