SHORT REPORT

Spontaneous Rupture of a Benign Cavernous Haemangioma of the Spleen Following Thrombolysis

P. M. Norris, S. C. A. Hughes and C. J. L. Strachan

Department of Vascular Surgery, Royal Sussex County Hospital Brighton, Brighton and Sussex University Hospitals Trust

Key Words: Spleen; Rupture; Benign cavernous haemangioma; Vascular malformation; Thrombolysis.

Introduction

Splenic rupture following thrombolysis or anticoagulation is rare.1,2 Ruptured splenic vascular malformations have been reported.3,4 We present the first report of spontaneous rupture of a benign cavernous haemangioma of the spleen following thrombolysis for myocardial infarction (MI).

Case Report

A 76-year-old man underwent streptokinase thrombolysis for acute antero-septal MI. Two weeks later, he continued to experience episodic unstable angina and was transferred for angiography. On admission, he was pain free. Relevant past medical history included ischaemic heart disease (17-year history), controlled hypertension (150/85 on admission), hypercholesterolaemia (cholesterol = 5.4 mmol/l with treatment) and moderate left ventricular failure. A cholinesterase deficiency was discovered during bowel resection for carcinoma 9 years previously. Medications included aspirin, atenolol, nicorandil, lisinopril, simvastatin, lanzoprazole, isosorbide mononitrate and GTN spray. He was allergic to penicillin and was a smoker. Echocardiography showed an ejection fraction of 45% with anterior and apical hypokinesia. A few hours after admission he collapsed, complaining of chest and upper abdominal pain, with dizziness and nausea. On examination he was sweating and hypotensive (BP = 67/41 mmHg) with a regular heart rate of 60 bpm. He had evidence of unstable angina on ECG and was commenced on intravenous heparin. The abdominal and chest pain persisted and a further hypotensive episode (BP = 84/51 mmHg) was associated with a sudden fall in haemoglobin (Hb = 8.7 g/dl). An urgent abdominal CT reported a splenic rupture with good arterial inflow and disruption of the splenic margins. Cardiac optimisation was pursued and an angiogram showed a 2.5-cm occlusion of the left anterior descending artery 2 cm from the origin. Successful angioplasty was performed. The cardiac catheter was placed opposite the splenic hilum revealing the site of rupture (Fig. 1).

He underwent emergency laparotomy and splenectomy. Four litres of haematoma was evacuated from the sub-diaphragmatic space, left paracolic gutter and lesser sac. Of note, 75% of the splenic capsule was stripped from the parenchyma. No obvious evidence of splenic pathology or trauma was noted. The distal part of the tail of the pancreas was removed with the spleen to control localised bleeding. He was managed on ITU for 4 days.

Histopathology revealed a benign cavernous haemangioma of the spleen with secondary thrombosis, infarction and rupture.

Postoperative complications were a small left pleural effusion and a right groin pseudo aneurysm requiring compression. Doppler ultrasound revealed
a 3.5 × 2.5 × 3-cm mass with minimal thrombus in the sac with free flowing blood. The arterial puncture hole was located on the anterior wall at the junction of the common femoral and superficial femoral arteries with a short track to the aneurysmal sac. He was discharged home two weeks following splenectomy, a total of six weeks after the initial MI. He was commenced on the local post-splenectomy management protocol and is well with no complications at 1-year follow up.

Discussion

Spontaneous splenic rupture complicating thrombolytic therapy carries 50% mortality and can mimic acute MI and cardiogenic shock.1,2 Cavernous haemangiomas of the spleen are a known rare cause of splenomegaly but are seldom diagnosed pre-operatively.3,4 They rupture spontaneously and can mimic pulmonary embolism.4 The administration of heparin exacerbates the haemorrhage. We found no previous reports of rupture after thrombolysis for MI. Splenectomy is the mainstay of treatment. This patient haemorrhaged and deteriorated rapidly; leaving insufficient time to consider coil embolisation as outlined in a recent case report, which demonstrated that proximal splenic artery coil embolism can be an effective treatment for a giant splenic artery aneurysm.5

References


Accepted 30 December 2002