When the going gets rough: a sequela of splenic trauma

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DESCRIPTION

Case report

A 45-year-old man presented with left-sided flank pain 2 days after a rough game of football. On examination, extensive bruising was evident over his left chest wall. His vital parameters were stable with a blood pressure reading of 129/85 mm Hg and a slight tachycardia of 105 bpm. He was exquisitely tender over the left seventh to ninth ribs. Rib fractures were confirmed on plain radiography and an ultrasound of the abdomen was performed to exclude any underlying visceral injury.

An abdominal ultrasound demonstrated free intra-abdominal fluid. A 1.5 cm round, hypoechoic lesion was present within the spleen. On colour Doppler examination bidirectional internal flow was observed with the typical 'Yin-Yang' sign consistent with a pseudoaneurysm (figure 1).

A contrast-enhanced abdominal CT scan in the arterial phase was subsequently performed. This

showed a subcapsular splenic haematoma involving the lower pole of the spleen and a splenic laceration with an intraparenchymal pseudoaneurysm (figure 2). No active extravasation was observed on delayed sequences. The pancreas did not show any signs of fat stranding or oedema, making pancreatitis unlikely. This was supported by a normal amylase level, making trauma the most likely cause for pseudoaneurysm formation in this case.

Selective splenic artery angiography was performed, confirming the pseudoaneurysm with sub-selective cannulation of the two feeding vessels. The latter were occluded using microcoils (figure 3).

DISCUSSION

The spleen is the most commonly injured intra-abdominal organ following trauma; contrast-enhanced CT is the imaging modality of choice in stable patients with blunt abdominal trauma.¹ The risk of rupture of a splenic artery

Figure 1 B-mode (left) and Doppler ultrasound (right) demonstrating a hypoechoic lesion in the spleen with bidirectional flow on Doppler examination, or 'Yin-Yang' sign (red arrow) in keeping with an intraparenchymal splenic pseudoaneurysm.

Figure 2 Selected axial images of a contrast-enhanced CT of the abdomen in the arterial phase. On the left, an enhancing 1.5 cm lesion is seen in keeping with the intraparenchymal splenic pseudoaneurysm (red arrow). On the right, status post-transcatheter embolisation with coils in the feeding vessels of the pseudoaneurysm (red arrow). Peri-splenic and peri-hepatic free fluid is seen (blue arrows).

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Figure 3 Digital subtraction angiography: on the left, selective splenic arterial angiography with evidence of a contrast blush confirming the pseudoaneurysm (red arrow). On the right, microcoils (red arrow) are visible in the pseudoaneurysm's feeding vessels. The pseudoaneurysm itself is no longer visible.

pseudoaneurysm is as high as 37%.² Treatment by transcatheter embolisation may avoid the need for surgery and is now becoming the treatment of choice in haemodynamically stable patients with blunt splenic injuries.³

Learning points

- ▶ Splenic artery pseudoaneurysm is important as a complication of splenic trauma.
- ▶ If a patient suffering from a splenic artery pseudoaneurysm becomes unstable, rupture of the said aneurysm is likely and immediate surgical intervention is required.
- ▶ Transcatheter embolisation of the pseudoaneurysm is useful in stable patients.

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Competing interests None.

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