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Haemobilia 2 weeks after a low thoracic stab wound

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Abstract
Background. Haemobilia occurs in only 1.2–5% of patients with accidental liver trauma. We describe an unusual case 2 weeks after penetrating thoracic injury. *Case outline*. A 27-year-old man underwent laparotomy for hepatic bleeding after a low thoracic stab wound. Two weeks later rectal blood loss occurred. CT scan and angiography revealed intrahepatic contrast extravasation at the previous stab wound site. Coils were successfully placed into two branches of the right hepatic artery. *Discussion*. Haemobilia should be considered in patients presenting with gastrointestinal blood loss after liver injury. It is diagnosed with angiography and preferably treated by embolisation.

Key Words: *Liver injury, haemobilia, angiography, embolisation*

Introduction

Liver trauma, gallstones, inflammation, vascular malformations, tumours and parasites can all cause haemobilia. It represents blood loss from liver vasculature into the gut through vasobiliary communication. After accidental liver trauma haemobilia is rare, occurring in only 1.2–5% of patients [1,2].

Case report

A 27-year-old man was admitted after being stabbed with a 10-cm knife. On clinical examination he had a 3.0-cm wound above the 8th rib just lateral of the right mid-clavicular line. Computed tomography (CT) scan showed collections of air and haematoma in the right anterior pleural cavity and free abdominal fluid. A perihepatic contrast accumulation occurred immediately after intravenous injection, indicating hepatic arterial injury (Figure 1). On laparotomy, 3 litres of blood and clots were removed. The stab wound extended from the right thoracic wall through the diaphragm into the right liver lobe. A bleeding 2-cm liver wound was sutured. CT scans on day 1 and 3 postoperatively revealed intrahepatic fluid at the stab wound site without contrast accumulation. Discharge was at the 13th postoperative day, but he was readmitted the same night because of rectal blood loss. CT showed increased intrahepatic fluid with accumulating contrast at the previous stab wound site (Figure 2). Overnight he became haemodynamically unstable, requiring blood transfusions. Endoscopy up to the papilla of Vater showed no signs of bleeding. Angiography revealed extravasation of contrast (Figure 3). Two branches of the right hepatic artery were successfully embolised. Ultrasound control 6 weeks later showed no flow in the resorbing intrahepatic haematoma.

Discussion

Diagnosing haemobilia is difficult, as it can occur several days after liver trauma, veiling the cause [2].

Figure 1. CT scan of the abdomen showing a perihepatic haematoma. There is extravasation of intravenous contrast between the liver and the perihepatic haematoma immediately after admission, indicating an arterial injury.

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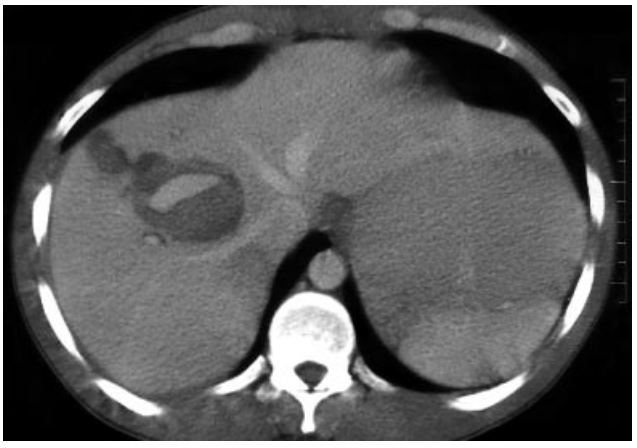

Figure 2. CT scan carried out on the night the patient was readmitted. There is an increase of the intrahepatic haematoma with perivascular accumulation of intravenous contrast.

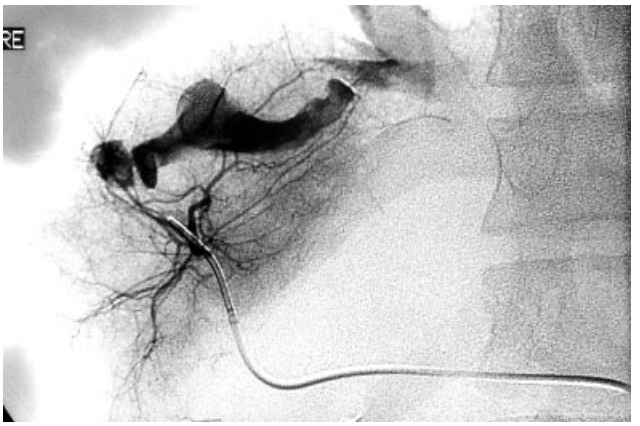

Figure 3. Angiography showing perivascular accumulation of contrast in the liver.

The described case is unusual, because of the exceptional length of this delay, and thoracic stabbing as a cause. After blunt abdominal trauma, haemobilia usually occurs later than after penetrating injuries. Haematoma and bile accumulate more gradually, inhibiting coagulum formation, inducing further necrosis. Eventually, fistula formation occurs between these collections, the hepatic vessels and bile ducts [3]. After penetrating trauma this process of cavitation and fluid formation is exceptional. Longer delays in these circumstances have only been described following rupture of pseudoaneurysms into the biliary system [2].

Endoscopy is only diagnostic in 12% of cases, by visualising blood draining from the papilla of Vater [4]. Although a CT scan is very specific for liver bleeding, it is not sensitive [5]. Angiography is the examination of first choice for diagnosis and treatment of haemobilia by selective embolisation, positioning endocoils as distally as possible [2,6].

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