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CT guided percutaneous drainage for left hepatic subcapsular hematoma after endoscopic retrograde cholangiopancreatography

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Informed consent statement: informed consent was obtained from the patient.

Keywords: Endoscopic retrograde cholangiopancreatography. Left hepatic subcapsular hematoma. CT guided percutaneous drainage.

Dear Editor,

A 29-year-old female was admitted to our hospital with a history of two endoscopic retrograde cholangiopancreatography (ERCP) and cholecystectomy. The patient

complained of repeated abdominal pain with fever for two days, with a body temperature of up to 38.2 °C. The laboratory tests showed hemoglobin (HB) 13.9 g/dl, white blood cells (WBC) $19.51 \times 10^9/l$, neutrophils (NEU) $15.94 \times 10^9/l$, total bilirubin (TBIL) 2.74 mg/dl, direct bilirubin (DBIL) 1.77 mg/dl, alanine transaminase (ALT) 75 U/l, aspartate transferase (AST) 65 U/l, alkaline phosphatase (ALP) 285 U/l and gamma-glutamyl transferase (GGT) 338 U/l. Magnetic resonance imaging demonstrated intrahepatic bile duct stones and upper common bile duct stenosis. The patient underwent ERCP, which involved dilating the stenotic segment with a balloon and clearing the stone with a basket and balloon. Six hours after surgery, the patient had pain in her left shoulder and abdomen with fever. Laboratory tests revealed HB 9.7 g/dl, WBC $16.71 \times 10^9/l$, NEU $13.92 \times 10^9/l$, TBIL 2.09 mg/dl, DBIL 1.31 mg/dl, ALT 72 U/l, AST 47 U/l, ALP 180 U/l and GGT 183 U/l. Computed tomography (CT) was performed (Fig. 1A). After conservative treatment, she still complained of left abdominal pain with fever, with a drop in HB to 0.9 g/dl. CT imaging (Fig. 1B) suggested that the extent of the hematoma in the left lobe of the liver was slightly larger than before (116 × 89 mm). CT guided percutaneous drainage was performed to relieve her abdominal pain and fever. The drainage fluid was dark red and thick. The diversion volume was 400 ml, 40 ml, 70 ml, 50 ml and 30 ml on days 1, 2, 3, 4, and 5, respectively. Upper abdominal CT was performed on the 5th and 10th day after drainage (Fig. 1C and D). The patient recovered and was discharged on the 11th day after the drainage.

Discussion

Left hepatic subperitoneal hematoma (HSH) is a rare complication after ERCP (1), and only five cases have been reported. The main symptoms of the patient were shoulder and abdominal pain and fever, with stable hemodynamics. The patient underwent CT-guided percutaneous drainage after no improvement with conservative treatment. On the 10th day after the drainage, abdominal CT showed that the hematoma was basically absorbed.

When removing bile duct stones, attention should be paid to avoid insertion of the

guidewire too deep into the intrahepatic bile duct in order to reduce the risk of HSH after ERCP. In case of hemodynamic instability, embolization or surgery may be performed (2,3). In cases of hemodynamic stability, CT guided percutaneous drainage may be an alternative if conservative treatment fails.

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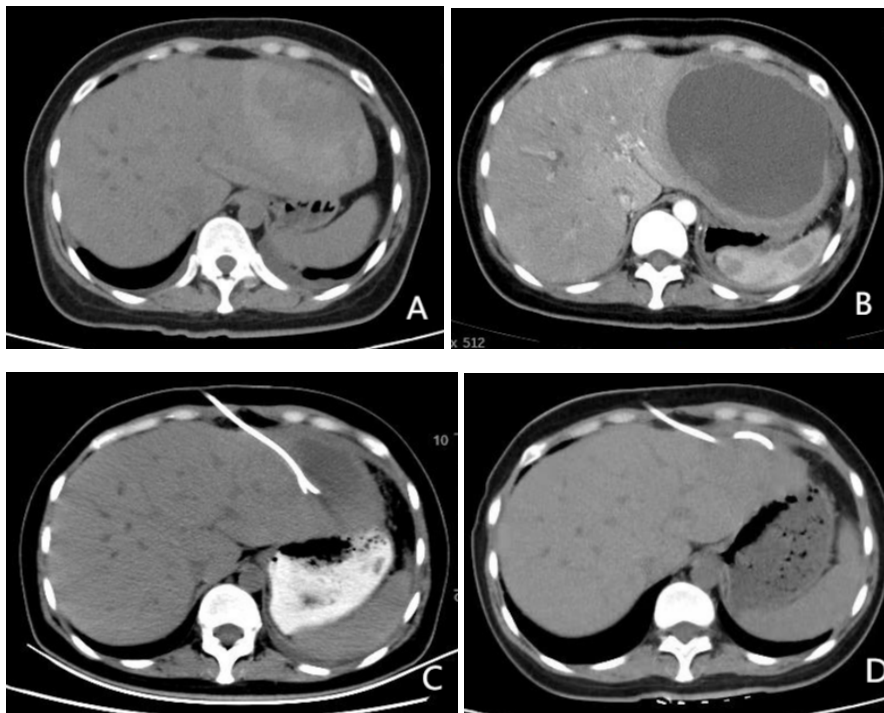


Fig. 1. A. CT scan of the upper abdomen: the left lobe of the liver shows a slightly dense shadow in the range of 94 mm to 64 mm, and a lamellar hypodense shadow is seen inside. B. CT enhanced upper abdomen: the hematoma in the left lobe of the liver was more extensive than before. C. CT scan of the upper abdomen: changes after drainage of the hematoma in the left lobe of the liver, with a significant reduction in the extent of the hematoma. D. CT scan of the upper abdomen: changes after drainage of hematoma in the left lobe of the liver, with basic absorption of the hematoma.