A 54-year-old woman underwent right trisegmentectomy for liver metastasis from colorectal cancer. One month postoperatively, she developed jaundice. Computed tomography (CT) showed a 16-cm surgical bed fluid collection, drained percutaneously, and intrahepatic ductal dilation. Percutaneous transhepatic cholangiography (PTC) demonstrated complete obstruction of the common hepatic duct (CHD). This could not be crossed, and an 8.5-Fr Dawson–Mueller external biliary catheter (Cook Inc., Bloomington, Indiana, USA) was placed, relieving the jaundice. Endoscopic retrograde cholangiopancreatography (ERCP) demonstrated a 1-cm CHD gap, which could not be traversed by a 0.018-in., 0.021-in., 0.025-in., or 0.035-in. straight-tip Jagwire (Boston Scientific, Natick, Massachusetts, USA) (Fig. 1). On review, it was noted that the patient’s total bilirubin had started rising after her initial trisegmentectomy. Therefore, a complete bile duct transection had most likely occurred intraoperatively. Hepaticojejunostomy was attempted, but was aborted intraoperatively because of the presence of tumor at the intended segment 3 bypass.

To reestablish internal biliary drainage, a combined endoscopic and percutaneous rendezvous procedure was planned. Due to left lobe hypertrophy, the hepatic artery and portal vein now lay adjacent to the bile duct defect, necessitating real-time CT during the PTC-ERCP rendezvous. Since the transection could not be traversed with a guidewire, a 5.5F RX needle knife papillotome (Boston Scientific) was advanced percutaneously (Fig. 2a).

Real-time CT demonstrated the relationship between the vessels and the bile duct (Fig. 3). Ensuring that the needle knife orientation was lateral to the vessels, the needle knife was set to endocut for cutting, and then advanced under continuous fluoroscopy (Fig. 2b–d). Ductal conti-
ninity was re-established. A 10-Fr internal/external biliary drain (Cook) was placed, and the jaundice resolved (Fig. 2 e, f). Bile duct injuries after cholecystectomy occur at an incidence of less than 1% and can be treated endoscopically or surgically [1]. An Italian study reported 22 patients with bile duct transection after cholecystectomy who were successfully managed by a “lasso” rendezvous technique, whereby a guidewire passed endoscopically into the subhepatic space is lassoed with a snare loop advanced percutaneously and pulled outside the body [2]. Our case is novel as the injury occurred after hepapectomy, the PTC-ERCP rendezvous required real-time CT due to the proximity of blood vessels, and needle knife electrocautery was used because the transection could not be crossed by guidewire alone.

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Competing interests: None

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Fig. 3 Coronal computed tomography during PTC-ERCP rendezvous, demonstrating that the hepatic artery (*) and portal vein (†) lie medial to the site of the bile duct transection.