

An alternative treatment for biliary injuries characterized by complete transection of the common bile duct: intraperitoneal rendezvous

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The endoscopic-radiological rendezvous procedure is classically performed after transhepatic advancement of a guidewire through the papilla for subsequent endoscopic retrograde cholangiopancreatography (ERCP).¹ In addition to this classical rendezvous method, in a few cases with complete transection of the common bile duct (CBD), a modified technique involving the insertion of a snare into the subhepatic space has been successfully performed.¹⁻³

A 58-year-old man was referred to our hospital with the biliary injury diagnosis after laparoscopic cholecystectomy. The patient was directed to our clinic. On physical examination, the patient had a surgically placed abdominal drain. Magnetic resonance cholangiopancreatography (MRCP) of the patient demonstrated complete interruption of the proximal CBD (Figure 1). During ERCP, the injected radiopaque contrast medium leaked into the intraperitoneal space from the distal CBD instead of proximal bile duct; also, we failed to access the proximal biliary tree, with the guidewire passing into the intraperitoneal space (Figure 2(a)). Thereafter, percutaneous transhepatic cholangiography (PTC) was performed. On PTC, intrahepatic ducts were visualized. Leakage of radiopaque contrast medium was observed as a tract in the intraperitoneal space with no passage of contrast medium into the CBD. During PTC, several attempts at advancing the guidewire into the CBD via the percutaneous access failed, with the guidewire repeatedly passing intraperitoneally. The guidewire was pushed into the peritoneum through the catheter placed during PTC (Figure 2(b)).

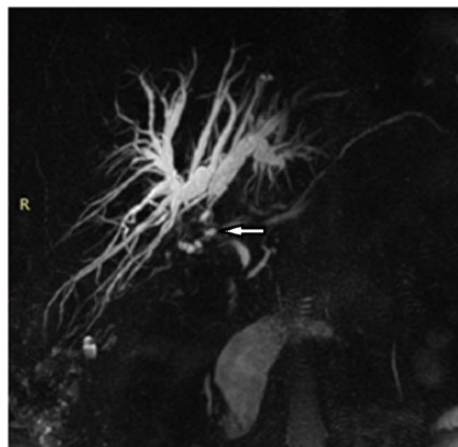


Figure-1. MR cholangiography showing complete interruption of the CBD (arrow).

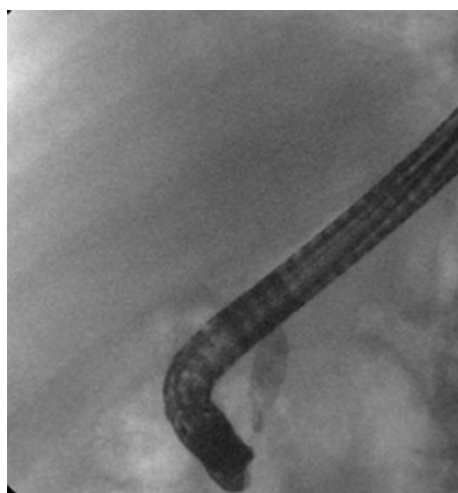


Figure 2a. ERCP showing no opacification of the intrahepatic bile ducts.

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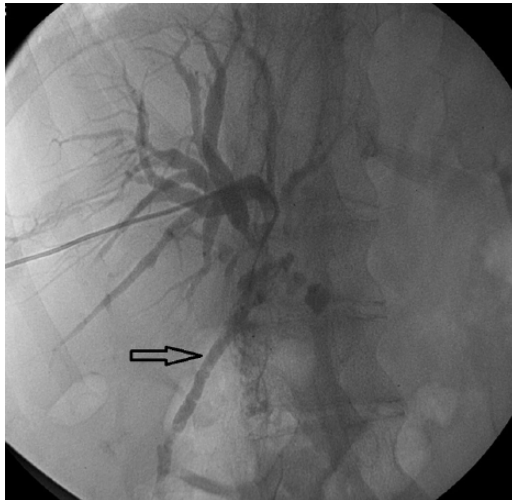


Figure 2b. Intrahepatic ducts were visualized on a subsequent PTC, with no passage of contrast medium into the CBD. Leakage of contrast medium was observed as a tract in the intraperitoneal space (arrow).



Figure 2c. Guidewire (white arrow) is inserted via the percutaneous access into the intraperitoneal space, where it is caught by the snare (black arrow) and advanced endoscopically.

Simultaneously, the snare was pushed from the papilla major into the intraperitoneal space. Subsequently, the guidewire was caught by the snare and pulled from the papilla (Figure 2(c)). After the 8 mm balloon dilation to the interrupted area, a 7 Fr plastic stent was placed over the wire to the right hepatic duct. PTC was also performed for the left hepatic duct in another session and another plastic stent was inserted

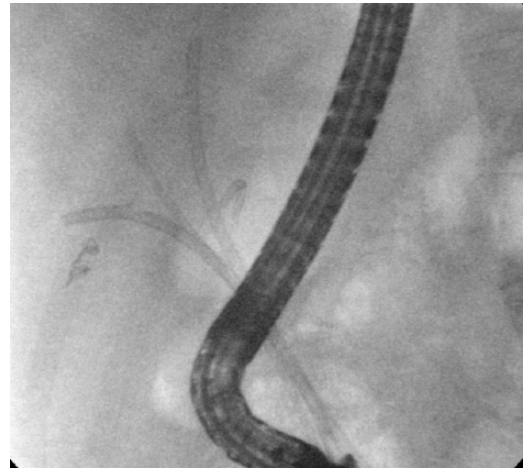


Figure 2d. Multiple stents were inserted into the CBD.

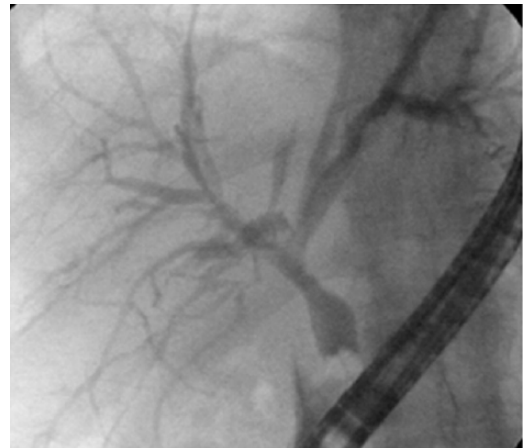


Figure 3. At the end of the first year, the stricture was almost completely resolved, and the stent-free patient was followed.

into the left hepatic duct. During the hospitalization period, the patient received parenteral broad spectrum antibiotics and showed no signs of peritonitis. The patient was discharged after the surgically placed abdominal drain was extracted. Over 1 year, four ERCP sessions were performed and sizes and/or numbers of stents were increased by each procedure (Figure 2(d)). At the end of the first year, a cholangiogram showed successful biliary reconstruction without stricture in the biliary tree (Figure 3). The patient expressed no complaints in the semi-annual follow-up period, and his laboratory and ultrasonography findings were normal.

Standard treatment for the complete transection of the CBD is surgery. When considering the re-surgery and its complications, the intraperitoneal endoscopic-radiologic rendezvous procedure can be performed as a mini-invasive method and is effective to reconstruct the biliary tract.

Our institution does not require ethics approval for reporting individual cases.

Our patient provided written informed consent for the information and images in our article for publication in an international medical journal.

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Conflict of interest statement

The authors declare that there is no conflict of interest.

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