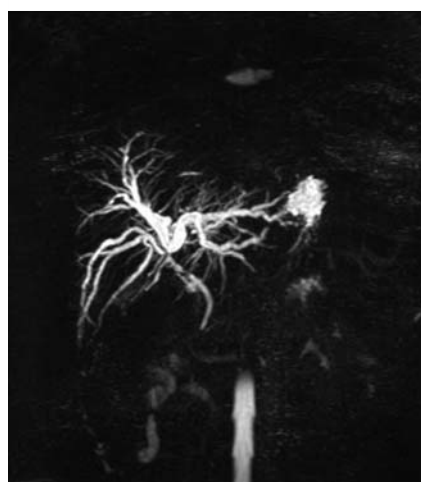


# A novel case of biliary common bile duct reconstruction by the rendezvous technique using endoscopic cholangioscopy and percutaneous cholangioscopy

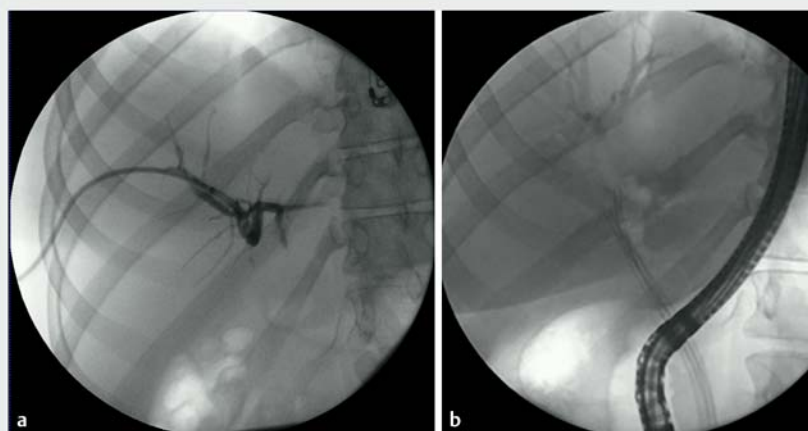
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► **Fig. 1** Magnetic resonance cholangiography image showing a Strasberg–Bismuth E2 stricture.

Biliary tract injuries during cholecystectomy are a rare, but not exceptional, adverse event, with severe consequences. The Strasberg classification with Bismuth modification is most frequently used to classify biliary tract injuries [1, 2]. Expertise in endoscopic, radiologic, and surgical management is required, especially for major biliary tract injuries [3]. A transhepatic-endoscopic approach is useful in difficult cases [4, 5]. We aim to describe a new solution after failure of the standard rendezvous technique, namely double cholangioscopy rendezvous.

A 21-year-old woman developed jaundice 3 months after she underwent cholecystectomy for lithiasis. The patient was referred to our center after undergoing an initial endoscopic retrograde cholangiopancreatography (ERCP), which was unsuccessful because of a blockage below the hilum (Strasberg–Bismuth E2) (► **Fig. 1**). A repeat ERCP attempt also resulted in failure, and external percutaneous drainage was required, with an 8.5-Fr drain placed. The patient's jaundice subsequently decreased.



► **Fig. 2** Fluoroscopic images showing: **a** the 12-Fr external drain in the intrahepatic duct; **b** multiple endoscopic stents placed a few weeks after the initial reconstruction.



► **Video 1** After several failed rendezvous procedures, a novel rendezvous technique is performed using cholangioscopy for the endoscopic retrograde cholangiopancreatography to visualize the stricture, along with percutaneous cholangioscopy using a bronchoscope.

A joint decision was made by the gastroenterologists and surgeons to perform the rendezvous technique to avoid a hepaticojejunostomy with a high risk of secondary stricture because of its proximity to the convergence. The first attempt made at this procedure was un-

successful, and the 8.5-Fr percutaneous drain was replaced with a 12-Fr drain (► **Fig. 2a**). A second attempt using simultaneous percutaneous cholangioscopy and ERCP was scheduled for a few days later (► **Video 1**), but this repeat classical rendezvous technique was a fail-

ure too. Attempts guided with cholangioscopy by the endoscopic route were also unsuccessful.

Cholangioscopy was used for ERCP to visualize the stricture, while percutaneous cholangioscopy was performed with a bronchoscope. A needle was used with the bronchoscope to puncture the stricture, and the common bile duct was found with a guidewire. The guidewire was then recovered by the ERCP approach, and a percutaneous internal/external drain (12 Fr) was inserted. A few weeks later, the percutaneous internal/external drain was exchanged with three 12-Fr plastic stents (► **Fig. 2 b**), which were replaced every 4 months for a duration of 1 year.

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## Competing interests

The authors declare that they have no conflict of interest.

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