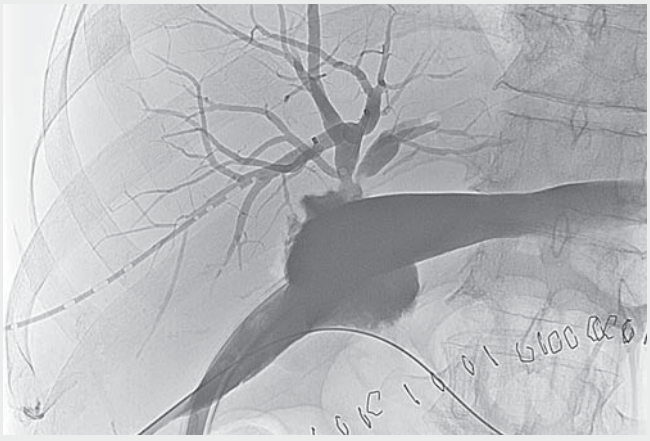
Impossible but true: complete transection of common bile duct treated with ERCP/percutaneous biliodigestive rendezvous



Video 1 Complete transection of the common bile duct. Two plastic pig-tailed stents were inserted in the right and left main hepatic duct, and were later replaced with self-expandable metallic ones.

Bile duct injuries after laparoscopic cholecystectomy have been reported even after surgical procedures performed by expert surgeons. Mean rates have plateaued in the past 10 years (0.30%–0.60%). The Hannover classification (2015) is a modification of the Strasberg–Bismuth classification and allows a distinction between small injuries (bile leakage from the cystic duct or aberrant right sectoral branch) and serious injuries inflicted during laparoscopic cholecystectomy [1, 2]. The Hannover classification also provides discriminators for the localization of tangentially or completely transected bile ducts above or below the bifurcation of the hepatic duct, which is a major drawback of other classification systems.

Small injuries are usually treated with endoscopic retrograde cholangiopancreatography (ERCP) in which plastic stents are placed in the affected branch for a mean of 3–6 months and then extracted. Severe injuries, on the other hand, are always treated with surgery (Roux-en-Y choledocho-/hepaticojejunostomy or end-to-end laparoscopic reconstruction) [3–5]. So far, no nonsurgical approaches have been reported, except for one short report on leakage after hepatobiliary and pancreatic surgery (totally radiological percutaneous rendezvous).

A 60-year-old man who had undergone open cholecystectomy in another hospital and been discharged 2 days earlier was admitted to the emergency room of our hospital for acute abdomen, cholangitis, and a collection of bilious-looking fluid in the surgical drainage (>700 mL/day). Abdominal computed tomography revealed a large perihepatic fluid collection and magnetic resonance imaging showed complete, severe leakage from the common bile duct, type D2 (Hannover classification) (▶ **Video 1**). Laboratory investigation revealed high levels of bilirubin (total 12.00 mg/dL, direct 10.00 mg/dL), leukocytosis (22,000 × 10^3/μL), and high levels of inflammatory markers.

The patient was in a severely compromised clinical condition. The leakage was due to complex iatrogenic duct transection with excluded liver segments. Given this critical scenario, emergency ERCP/percutaneous biliodigestive rendezvous was attempted (▶ **Video 1**). An alternative surgical approach was ready to be employed if the first approach failed.

By means of a gooseneck snare (Medtronic), we managed to achieve our aim. Two plastic pig-tailed stents (8.5 Fr, 12 cm) were successfully inserted in the right and left main hepatic duct and a bile bag draining from the subhepatic space was left (▶ **Video 1**). In the following days cholangiography showed an improvement in the biliary leakage and a progressive reduction in the output of the bile bag. The second step was replacement of the plastic stents with self-expandable metallic ones (10 Fr, 12 cm) (▶ **Video 1**).

The patient was discharged uneventfully 1 month later, and at 2-month follow-up cholangiography showed complete reconstruction of the biliary tree without any evidence of leakage (▶ **Video 1**).

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Competing interests

The authors declare that they have no conflict of interest.

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