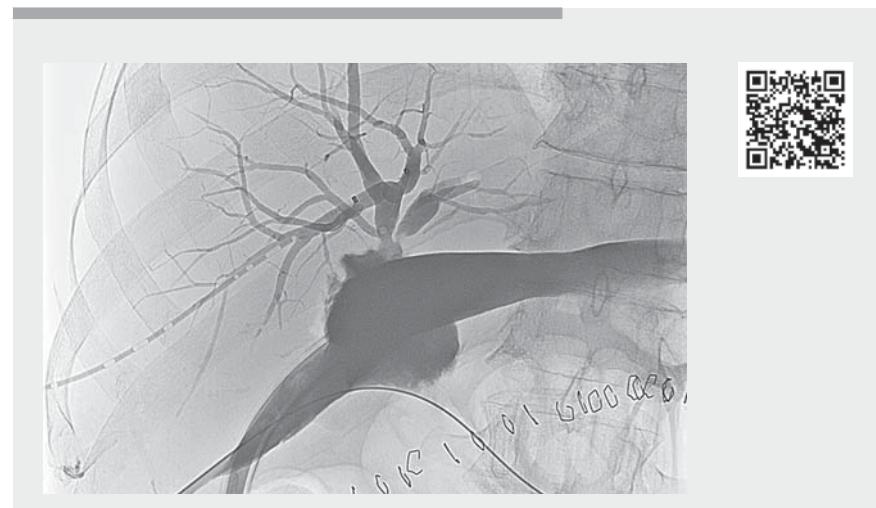


Impossible but true: complete transection of common bile duct treated with ERCP/ percutaneous biliodigestive rendezvous

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



► 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.

10.00 mg/dL), leukocytosis ($22,000 \times 10^3/\mu\text{L}$), 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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References

- [1] Strasberg SM, Hertl M, Soper NJ. An analysis of the problem of biliary injury during laparoscopic cholecystectomy. *J Am Coll Surg* 1995; 180: 101–125
- [2] Chun K. Recent classifications of the common bile duct injury. *Korean J Hepatobiliary Pancreat Surg* 2014; 18: 69–72
- [3] de Reuver PR, Busch OR, Rauws EA et al. Long-term results of a primary end-to-end anastomosis in perioperative detected bile duct injury. *J Gastrointest Surg* 2007; 11: 296–302
- [4] Kwak BK, Choi HJ, You YK et al. Laparoscopic end-to-end biliary reconstruction with T-tube for transected bile duct injury during laparoscopic cholecystectomy. *Ann Surg Treat Res* 2019; 96: 319–325
- [5] Mansueto G, Gatti FL, Boninsegna E et al. Biliary leakage after hepatobiliary and pancreatic surgery: a classification system to guide the proper percutaneous treatment. *Cardiovasc Intervent Radiol* 2020; 43: 302–310

Bibliography

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