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 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.

The authors

Valeria D’Ovidio1, Valentina Pompa2, Nicola Maltzeff2, Giulio Sodani2, Roberto Cancellieri2, Marco Emilio Bazuro1
1 Gastrointestinal Endoscopy Unit, S. Eugenio Hospital, Rome, Italy
2 Interventional Radiology Unit, S. Eugenio Hospital, Rome, Italy

Corresponding author

Valeria D’Ovidio, MD
Gastrointestinal Endoscopy Unit, Ospedale Sant’Eugenio, Rome, Italy
valeria.dovidio@asroma2.it

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.
References


Bibliography

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