

Endoscopic restoration of completely transected and prolapsed common bile duct

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Rupture and intussusception of the common bile duct (CBD) is an uncommon but severe adverse event of ERCP. Few case reports of complete transection of the CBD during ERCP have been published, and there is no consensus on the best management option for this problem. We describe a case of successful endoscopic restoration of a transected and

prolapsed CBD ([Video 1](#), available online at www.VideoGIE.org).

A 75-year-old woman presented to the emergency department with acute cholangitis. An urgent ERCP revealed 2 large stones in the CBD. After sphincterotomy and large-balloon sphincteroplasty, mechanical lithotripsy was done to crush the stones. During Dormia basket

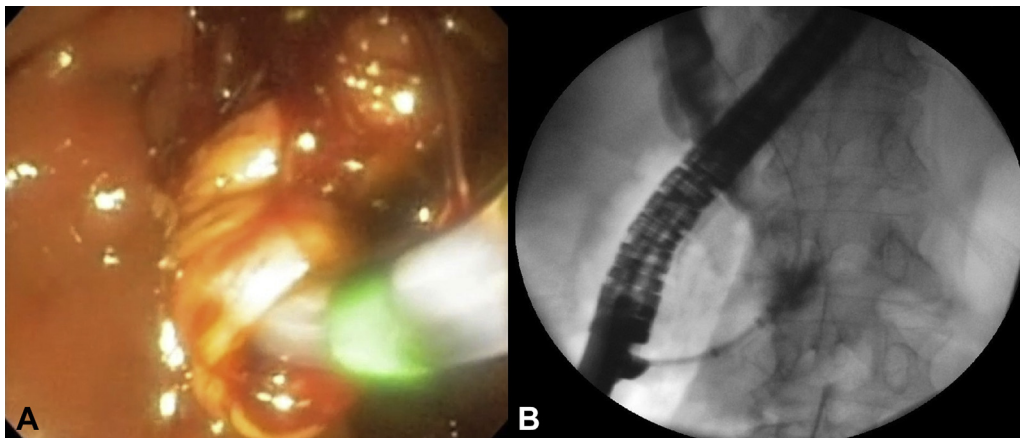


Figure 1. **A**, Cannulation of intussuscepted common bile duct with a sphincterotome, followed by advancement of a guidewire into the proximal biliary system. **B**, Cholangiographic view showing complete disruption of biliary drainage, with extravasation of contrast material.

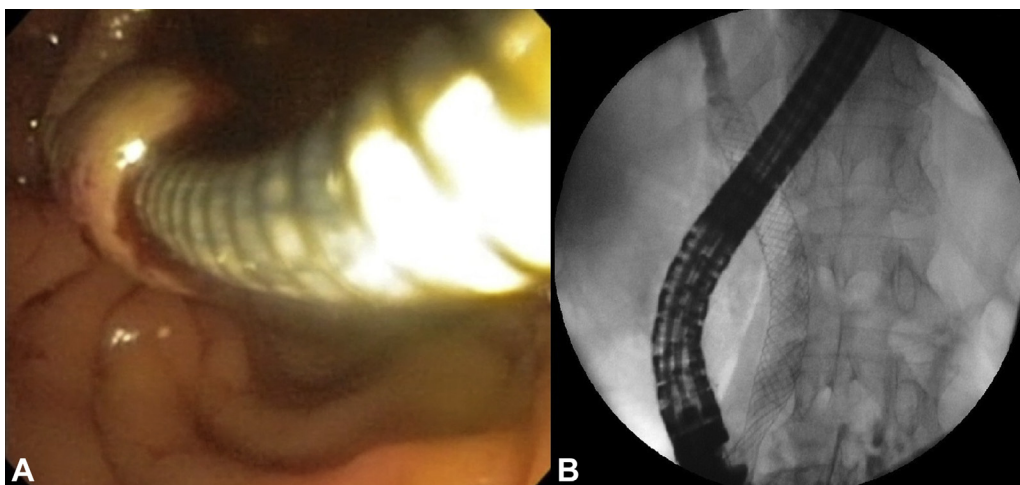


Figure 2. **A**, Placement of a fully covered 10-mm × 8-cm self-expandable biliary metal stent to reconnect the common bile duct. **B**, Cholangiographic view showing successful restoration of biliary tree drainage.

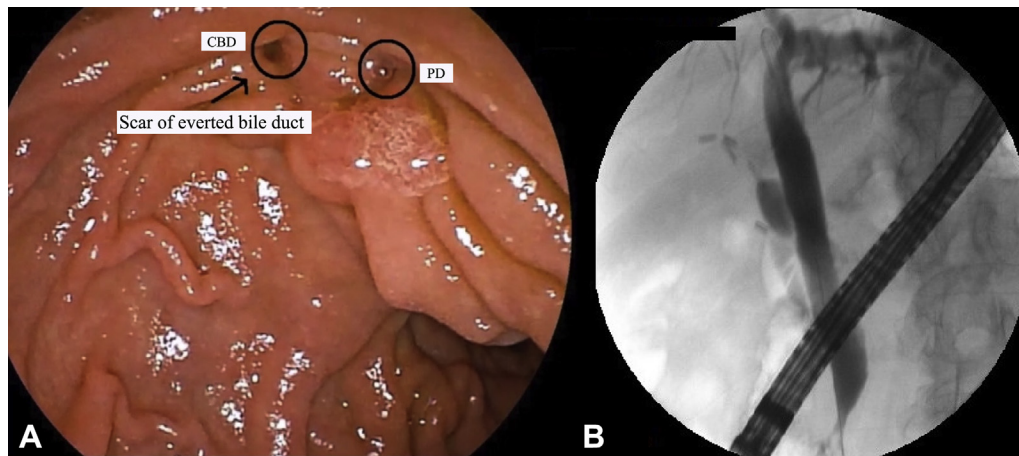


Figure 3. **A**, Follow-up endoscopic view showing 2 separated ducts at the second portion of the duodenum. The duct located in the superior border corresponds to the common bile duct; it was cannulated to obtain a new cholangiogram. **B**, Cholangiographic view showing adequate restoration of biliary tree drainage.

extraction of the CBD stones, intussusception of the bile duct into the duodenum was noticed.

The everted bile duct was cannulated with a wire-guided sphincterotome, and the guidewire was eventually advanced into the proximal biliary tree after many unsuccessful attempts. A cholangiogram showed complete transection of the CBD and extravasation of contrast material (Fig. 1). A fully covered biliary metal stent (10 mm × 8 cm) was inserted to reconnect the CBD, with successful restoration of the biliary tree drainage (Fig. 2). The patient was hospitalized and received intravenous cefotaxime and metronidazole for a week. She recovered successfully and was discharged from the hospital without any additional endoscopic or surgical intervention. Three months later the stent was removed without adverse events (Fig. 3).

Iatrogenic bile duct transection can occur after surgical cholecystectomy, but complete intussusception of the CBD after ERCP is a very rare adverse event. Even though ERCP is the current standard of care for the management of most bile duct injuries, Roux-en-Y hepaticojejunostomy is usually required to treat the completely transected CBD.¹⁻³ Recently, endoscopic-radiologic rendezvous procedures have been attempted to treat bile duct transection. These challenging procedures require an expert team of specialists and usually the aid of linear EUS.⁴⁻⁶

Novel single-operator techniques assisted with cholangioscopy are excellent alternatives but are still expensive procedures not widely available in all hospitals.⁷ Rocha et al⁸ recently published a case report of intussusception of the CBD after a stone extraction maneuver. They tried to cannulate the everted duct without success, using multiple maneuvers including needle-knife incision of the prolapsed bile duct in the duodenum. The patient underwent an exploratory laparotomy and a Roux-en-Y hepaticojejunostomy. In this case report, successful cannulation of the proximal CBD followed by placement of a fully covered self-expandable metal stent avoided surgery.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: CBD, common bile duct.

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