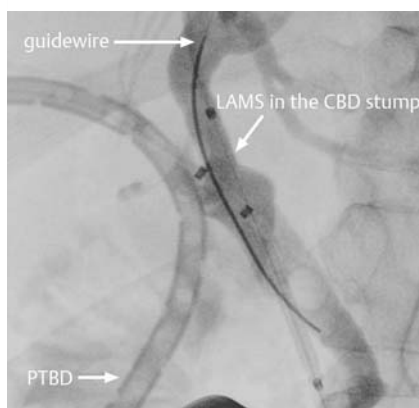


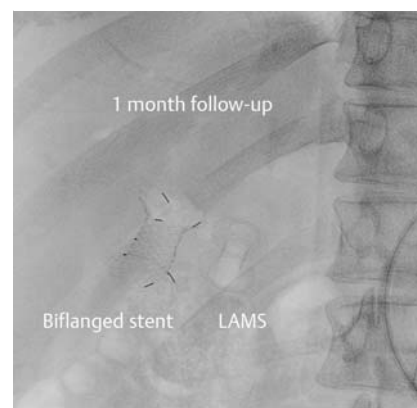
Endoscopic treatment of complicated bile duct stricture after surgery for traumatic bile duct injury



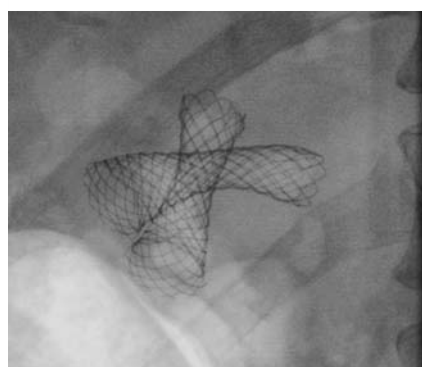
► **Fig. 1** Occlusive percutaneous cholangiography using a 12-mm Fogarty balloon to dilate the common bile duct and make it visible under endoscopic ultrasound.



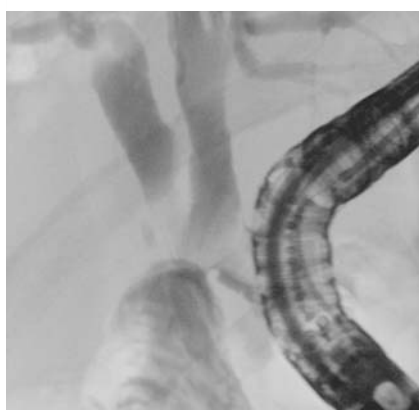
► **Fig. 2** To safely open the lumen-apposing metal stent in a small-caliber common bile duct, the stent was placed as deep as possible in the biliary tract through a guidewire.



► **Fig. 3** Biflanged stent and lumen-apposing metal stent at 1-month follow-up.



► **Fig. 4** "Hand-tailored," fully covered, self-expandable metal stents placed through the choledochoduodenostomy crosswise to avoid excessive tension of the anastomotic area.



► **Fig. 5** Final outcome on the hepaticojejunostomy.

Hepatic lesions are common in abdominal traumas [1] and generally involve liver parenchyma.

Nevertheless, bile duct lesions are rare and challenging to treat [2, 3].

Biliodigestive anastomoses are the most frequently performed surgeries [3], but the risk of long-term adverse events is high, especially for biliary anastomotic strictures [4].

Here we present a case of traumatic biliary disconnection previously treated by

biliodigestive latero-lateral anastomosis on Roux-en-Y-loop, complicated by anastomotic stricture.

A 42-year-old man without relevant comorbidities was unseated from his horse and reported a severe bile leak due to intrapancreatic biliary tract disconnection. For this reason, he underwent hepaticojejunal latero-lateral anastomosis on Roux-en-Y-loop, with previous ligation of the distal choledocus.

After six months, a biliary anastomotic stricture developed and percutaneous

transhepatic biliary drainage was performed as the primary treatment.

Because of the very low quality of life due to poor tolerance/compliance with percutaneous transhepatic biliary drainage, the patient was referred to our endoscopy center.

At first, a standard approach to the major duodenal papilla was attempted with a duodenoscope (ED-127; Pentax Medical), but it failed because the intrapancreatic biliary tract was completely disconnected.

At this point, an occlusive cholangiography was performed (using a Fogarty balloon pushed into the bile duct through the percutaneous access) (► **Fig. 1**) in order to make the common bile duct visible on endoscopic ultrasound. The Hot AXIOS electrocautery-enhanced delivery system (Boston Scientific) was chosen to change the approach, and a fully covered, 8×8-mm lumen-apposing metal stent (LAMS) was released between the duodenum and the choledocal stump (► **Fig. 2**). Then a fully covered, 16-mm×2-cm biflanged metal stent (Nagi Stent; Euro-Medical Corp.) was placed through the hepaticojejunostomy using the percutaneous access to achieve stable dilation of the anastomotic stricture (► **Fig. 3**).



Video 1 A case of traumatic choledochal disconnection previously treated by biliodigestive latero-lateral anastomosis on Roux-en-Y-loop complicated by anastomotic stricture and solved by “tailored” endoscopic treatment.

At the six-month follow-up, both stents were removed, and two “hand-tailored,” fully covered, 6-mm×3-cm self-expandable metal stents (WallFlex; Boston Scientific) were placed through the new choledocoduodenostomy to consolidate the anastomosis (► **Video 1**). The stents were positioned crosswise in order to avoid excessive tightening on the walls of the biliary ducts (► **Fig. 4**). These stents were removed after six months and, at the cholangiography, the choledocoduodenostomy was patent (► **Fig. 5**). The patient remained asymptomatic and no recurrence of symptoms was reported.

Endoscopy_UCTN_Code_TTT_1AR_2AG

Competing interests

None

The authors

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