Extra-anatomical intraduodenal endoscopic–radiologic biliary rendezvous for treatment of iatrogenic complete stenosis of the common bile duct

Minimally invasive radiologic–endoscopic recanalization or reconstruction of the common bile duct (CBD) for benign complete stenosis or complex iatrogenic lesions is routinely practiced at some tertiary centers [1,2]. Various techniques have been reported, including endoscopic ultrasound (EUS)-guided insertion of a magnet through a previous choledocho-duodenostomy [1–4].

A 38-year-old woman who had undergone laparoscopic cholecystectomy 6 months earlier developed an iatrogenic biliary fistula with partial stenosis of the CBD. A biliary fully covered self-expanding metallic stent (FCSEMS) was placed for 2 months, but jaundice and pain recurred 3 months after its removal. Occlusive endoscopic retrograde cholangiography revealed complete stenosis at the mid CBD (Fig. 1).

A guidewire was maneuvered to perforate the CBD at a point distal to the stricture, and percutaneous tranhepatic cholangiographic guidance was used to perforate the hepatic duct with a guidewire at a point proximal to the stricture (Fig. 2). However, both guidewires tended to advance in the direction of the duodenal bulb, and several attempts to achieve a rendezvous in the subhepatic space failed. Therefore, we then advanced both guidewires along the preferential route to reach the duodenal bulb through the same hole, created by the guidewire (Fig. 3a), thus avoiding significant duodenal injury. Next, with a Dormia basket that had been inserted endoscopically, the proximal guidewire was grasped (Fig. 3a, Fig. 3b) and constant, controlled traction was applied to extra-anatomically establish continuity of the biliary tree (Fig. 4a, Fig. 4b, Fig. 4c). An FCSEMS (Wallflex; Boston Scientific, Natick, Massachusetts, USA) was delivered for definitive treatment and scheduled to be replaced after 6 months (Fig. 5). The patient was discharged.

Fig. 1 Occlusive retrograde cholangiogram showing complete stenosis of the common bile duct (CBD) in a 38-year-old woman. This occurred after removal of a stent placed to manage an iatrogenic biliary fistula with partial stenosis of the CBD that had developed following laparoscopic cholecystectomy.

Fig. 2   a Percutaneous transhepatic cholangiogram showing common bile duct cutoff. b The guidewire that had been inserted percutaneously passed through the choledochal stenosis and reached duodenal bulb.

Fig. 3 a, b Extra-anatomical intraduodenal endoscopic–radiologic biliary rendezvous. Both guidewires reach the duodenal bulb through the same hole (red arrows). a A Dormia basket is inserted endoscopically and pushed into the lumen of the duodenal bulb (blue arrow). The proximal guidewire that has been inserted percutaneously can be seen (green arrow). b Rendezvous (orange arrow) is achieved by grasping the guidewire that has been inserted percutaneously and reaching the lumen of the duodenal bulb.

Fig. 4 a, b Rendezvous in the subhepatic space (orange arrow) is achieved by grasping the guidewire that has been inserted percutaneously (green arrow). The proximal guidewire that has been inserted endoscopically (blue arrow) is grasped (orange arrow) and constant, controlled traction is applied, thus establishing continuity of the biliary tree (blue arrow) (Fig. 4a, Fig. 4b, Fig. 4c).

Fig. 5 a An FCSEMS (Wallflex; Boston Scientific, Natick, Massachusetts, USA) is delivered for definitive treatment. b The patient was discharged.
from the hospital the next day on a normal diet. Endoscopic–radiologic reconstruction of an injured bile duct is a feasible and safe technique that spares the patient the major surgery of biliary reconstruction. We report here the first case of extra-anatomical (i.e., intraduodenal) rendezvous to re-establish biliary continuity in a patient with an iatrogenic complete stricture. This report should encourage the use of other alternative methods, such as “pure EUS-guided endoscopic biliary rendezvous,” that make it possible to avoid the step of subhepatic rendezvous, which has been problematic until now.

**Endoscopy_UCTN_Code_TTT_1AR_2AD**

**Competing interests:** None

**Bruno Meduri**<sup>1</sup>, **Serge Derhy**<sup>2</sup>, **Parag Dhumane**<sup>3</sup>, **Jean-Loup Dumont**<sup>1</sup>, **Thierry Tuszynski**<sup>1</sup>, **Bertrand Marie Vergeau**<sup>1</sup>, **Gianfranco Donatelli**<sup>1</sup>

<sup>1</sup>Unité d’Endoscopie Interventionnelle, Ramsay Générale de Santé, Hôpital Privé des Peupliers, Paris, France
<sup>2</sup>Unité de Radiologie Interventionnelle, Ramsay Générale de Santé, Hôpital Privé des Peupliers, Paris, France
<sup>3</sup>Department of General and Laparoscopic Surgery, Lilavati Hospital and Research Center, Bandra West, Mumbai, India

**References**


**Bibliography**

DOI: http://dx.doi.org/10.1055/s-0034-1393383

Endoscopy 2015; 47: E565–E566

© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

**Corresponding author**

Gianfranco Donatelli, MD
Unité d’Endoscopie Interventionnelle
Ramsay Générale de Santé
Hôpital Privé des Peupliers
8 Place de l’Abbé C. Hénocque
75013 Paris
France
Fax: +33-01-44-16-56-15
donatelligianfranco@gmail.com