A 65-year-old woman was admitted to our department with obstructive jaundice secondary to locally advanced unresectable pancreatic adenocarcinoma. Biliary cannulation attempt was unsuccessful during endoscopic retrograde cholangiopancreatography; therefore, biliary drainage with endoscopic ultrasound (EUS)-guided choledochoduodenostomy (CDS) was planned with palliative intent (▶ Video 1).

An upstream common bile duct (CBD) dilatation (14 mm) was visualized on EUS (▶ Fig. 1). A 0.025-inch guidewire was preloaded into a lumen-apposing metal stent (LAMS) (8 × 8 mm) mounted onto an electrocautery-enhanced delivery system (Hot-AXIOS; Boston Scientific Co., Marlborough, Massachusetts, USA). The cautery-enabled access catheter was advanced through the duodenal bulb wall into the CBD using the “hybrid free-hand” insertion technique [1]; however, the portal vein was accidentally punctured. Despite this severe complication, the delivery system was carefully withdrawn upwards until the internal flange was able to be deployed into the CBD while the proximal flange was deployed into the duodenal bulb under EUS guidance (▶ Fig. 2). After the LAMS had been delivered, severe bleeding was observed through the stent. Using a sphincterotome passed through a gastroscope, wire-guided access through the LAMS to the CBD was achieved (▶ Fig. 3). Then, a 0.025-inch guidewire (VisiGlide; Olympus Medical Systems Corp., Tokyo, Japan) was advanced across the tumor and the papilla. Following successful biliary cannulation after EUS-guided biliary rendezvous, a fully covered self-expandable metal stent (WallFlex Biliary RX Stent; Boston Scientific Co.) (10 × 60 mm) was placed into the CBD to seal the disruption of the portal vein wall (▶ Fig. 4). The patient was discharged home after 72 hours without further adverse events, and bilirubin levels returned to normal after 7 days.

Complications during EUS-CDS may occur [2–5], and the use of electrocautery-enhanced LAMS for this procedure is still in its infancy. Pre-existing guidewire access to the CBD before the advancement of a cautery-enabled stent delivery catheter may prevent complications.

Endoscopic management of accidental portal vein puncture during endoscopic ultrasound-guided choledochoduodenostomy

Competing interests

Dr. Aparicio is a consultant for Boston Scientific.
The authors

Carolina Mangas-Sanjuan, Maryana Bozhychko, Juan Martinez, Luis Compañy, Francisco Ruiz, Juan Antonio Casellas, José Ramón Aparicio

Endoscopy Unit, Hospital General Universitario de Alicante, Instituto de Investigación Sanitaria y Biomédica de Alicante, ISABIAL, Alicante, Spain

Corresponding author

José Ramón Aparicio, MD
Endoscopy Unit, Hospital General Universitario de Alicante, C/Pintor Baeza 12, 03010 Alicante, Spain
Fax: +34-965-933468
japariciot@gmail.com

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DOI https://doi.org/10.1055/a-0991-7763
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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