

Endoscopic retrograde cholangiopancreatography performed through a temporary lumen-apposing metal stent in a patient with a benign gastric outlet obstruction



We report the case of an 87-year-old man who presented with acute cholangitis. At presentation, an abdominal computed tomography (CT) scan revealed choledocholithiasis with biliary dilation and homogenous thickening of the bile duct wall. He was admitted under antibiotics and a percutaneous cholecystos-



► **Fig. 1** Cholangiography revealing cholelithiasis and stones in the distal common bile duct.

tomy was performed. Cholangiography through the cholecystostomy (► **Fig. 1**) revealed a swollen gallbladder, cholelithiasis, and stones in the distal common bile duct (CBD) up to 8 mm. Given the patient's complaints and radiological findings, an endoscopic retrograde cholangiopancreatography (ERCP) was performed. During duodenoscopy an unexpected peptic stricture was observed at the duodenal bulb, preventing advancement of the duodenoscope into the duodenum (► **Fig. 2a**). The patient underwent balloon dilation up to 12 mm and started proton pump inhibitor (PPI) therapy. However, 2 weeks later the stricture was still not transposable by the duodenoscope (► **Fig. 2b**). To perform ERCP, a temporary 15-mm×10-mm lumen-apposing metal stent (LAMS) (AXIOS; Boston Scientific, Marlborough, Massachusetts, USA) was deployed under endoscopic/ fluoroscopic control to access the papilla (► **Video 1**).

One week later, the lumen was widened enough to allow passage of the duodenoscope (► **Fig. 2c**) and ERCP was performed. After a needle-knife fistulotomy for biliary access, the cholangiogram

revealed two 10-mm stones in the distal CBD (► **Fig. 3**) that were removed using an extraction balloon. The patient recovered uneventfully and was discharged the following day.

Combined benign obstruction of the bile duct and duodenum is a rare finding. Gastric outlet obstruction due to peptic stenosis is seldom observed since the PPIs and *Helicobacter pylori* treatment era. Traditionally, treatment of benign short gastrointestinal strictures involves endoscopic balloon dilation, steroid injection, or incisional therapy; conventional fully-covered metal stents may be an option in refractory long strictures [1, 2]. Although initially designed to drain pancreatic collections, LAMS are effective, versatile, and safe for treatment of a benign stenosis of less than 10 mm [3, 4].

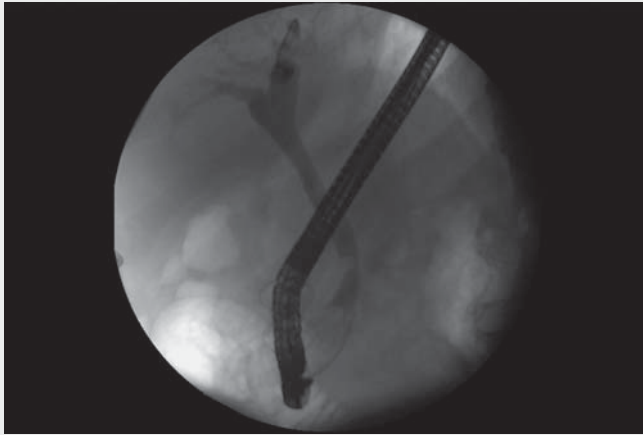
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Competing Interest

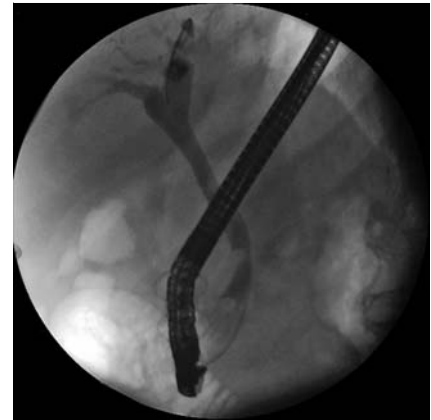
The authors declare that they have no conflict of interest.



► **Fig. 2** **a** Endoscopic retrograde cholangiopancreatography (ERCP) revealing a stricture of the duodenal bulb with a luminal diameter of less than 10 mm. **b** Duodenal bulb stricture after endoscopic balloon dilation up to 12 mm. **c** Duodenal bulb stricture with lumen-apposing metal stent in place.



▶ Video 1 Endoscopic placement of a temporary stent allowed access into the papilla to perform endoscopic retrograde cholangiopancreatography and treat choledocholithiasis.



▶ Fig. 3 ERCP cholangiogram showing two 10-mm stones in the common bile duct.

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