Complex biliary stricture treated by percutaneous single-operator cholangioscopy and multiple biodegradable stents

The endoscopic treatment of biliopancreatic disease in patients with altered surgical anatomy is challenging [1]. A 42-year-old woman who had previously undergone a standard Whipple procedure surgery because of duodenal adenocarcinoma presented with multiple large biliary stones and a symptomatic benign stricture of the hepaticojejunostomy, detected by magnetic resonance imaging. Double-balloon enteroscopy failed to reach the hepaticojejunostomy and hybrid radiological/endoscopic treatment was decided upon.

First, a 7-Fr percutaneous biliary drain was placed (▶ Video 1). Two days later, a double-lumen, 11-Fr introductory catheter was placed and percutaneous single-operator cholangioscopy-assisted electrohydraulic lithotripsy was carried out (SpyGlass DS, Boston Scientific, Marlborough, Massachusetts, USA) (▶ Fig. 1).

Following stricture dilation to 13 mm (CRE, Boston Scientific), the fragmented stones were pushed into the lumen of the small bowel using an endoscopic retrograde cholangiopancreatography (ERCP) balloon. A new internal–external radiological drain was placed.

In a second session, the percutaneous drain was removed. A residual biliary stone (▶ Fig. 2) was gently pushed into the small bowel using a wire-guided anterograde balloon extractor. Thus, three 0.0035/0.0025-inch guidewires were placed through the hepaticojejunal stricture using the percutaneous tract (▶ Fig. 3). Three 10-Fr, 6-cm biodegradable stents (Archimedes, Medtronic, Dublin, Ireland) with a slow profile (11 weeks for biodegradation) were placed in parallel in the hepaticojejunal stricture (▶ Fig. 4), while the three guidewires were kept in place to allow repositioning if needed. A 7-Fr cannula was used as a pusher under radiological guidance. The patient was discharged 48h later with no complications and no biliary symptoms at 1-month follow-up.

Biodegradable biliary stents are a new alternative in the management of benign biliary strictures. These stents have a helical channel design and good fluoroscopic visibility [2]. Their main advantage is that they do not need to be ex-
changed. This feature can be extremely useful and can avoid more invasive procedures or major surgery in patients with altered surgical anatomy, as in the present case.

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Competing interests

The authors declare that they have no conflict of interest.

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