Indeterminate biliary stricture treated by antegrade cholangioscopy through an endoscopic ultrasound-guided hepaticojejunostomy

Indeterminate biliary strictures represent a clinical challenge [1, 2]. Endoscopic retrograde cholangiopancreatography (ERCP) with brushings and transpapillary biopsies have limitations in terms of their sensitivity and specificity [3, 4]. Cholangioscopy plays a relevant role in this field with a high sensitivity for the macroscopic appearance [5].

A 60-year-old woman, who had undergone total gastrectomy with Roux-en-Y reconstruction for gastric adenocarcinoma (pT2 N0 M0) 4 years previously, presented to our ambulatory unit with upper abdominal pain and alteration of liver function tests. An abdominal computed tomography scan (▶Fig. 1) and magnetic resonance cholangiopancreatography (MRCP) (▶Fig. 2) showed bile duct dilatation and a distal stricture of the common bile duct. However, an endoscopic ultrasound (EUS) approach was not feasible or effective because of her altered anatomy. A first attempt to reach the papillary area and perform a subsequent ERCP using a pediatric colonoscope was unsuccessful owing to the length and angulations of the jejunal loop. Therefore, a hepaticojejunostomy was performed endoscopically (▶Fig. 3a). First, a transjejunal he-
patic EUS-guided puncture was done using a 19G needle. A guidewire was pushed through the transjejunal access through the papillary area retrogradely and was recovered through the pediatric colonoscope (▶ Fig. 3b). The papilla was cannulated from distance under fluoroscopic guidance (because of a tight angulation at Treitz’s ligament) using a 12-mm Fogarty balloon. Cholangiography confirmed homogeneous dilatation of the bile ducts with a distal stricture. The stricture was dilated using a 10-mm pneumatic balloon; brushings and transpapillary biopsies were then performed. A 10-Fr 12-cm biliary plastic stent was left in place to maintain patency of the endoscopic hepaticojejunostomy.

Because the cytology was non-diagnostic, antegrade cholangioscopy using the SpyGlassDS system (Boston Scientific Co.) was successfully performed through the endoscopic hepaticojejunostomy 2 weeks later (▶ Video 1). The appearance of the stricture was non-malignant; several cholangioscopic biopsies were taken using a SpyBite (Boston Scientific Co.), which later confirmed there was no cellular atypia on histopathology. Finally, a 10-Fr 12-cm biliary plastic stent was positioned through the hepaticojejunostomy.

No early adverse events occurred and the patient was discharged the day after the procedure. At her 1-month follow-up visit, the patient had developed two liver abscesses (S4 – S8), which were probably related to bile duct contamination during the cholangioscopy. Percutaneous drainage of the abscesses was performed, and the patient was found to be doing well at her 3-month follow-up visit.

Competing interests

The authors declare that they have no conflict of interest.

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References


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Video 1 Antegrade cholangioscopy through an endoscopic ultrasound-guided hepaticojejunostomy to treat a biliary indeterminate stricture in a patient with Roux-en-Y reconstruction.