Dear Editor,

The case was an 81-year-old Ecuadorian female with a history of high blood pressure and chronic ischemic heart disease. She was admitted in April 2021 due to acute cholangitis. Magnetic resonance (MR) cholangiography showed bile duct dilation and possible obstruction in the distal common bile duct. Endoscopic-ultrasound showed a non-dilated common bile duct, distal asymmetric thickening of 15 mm and biliary mud. Endoscopic retrograde cholangiopancreatography (ERCP) showed a doubtful defect of suprapapillary repletion, without extraction of material after sphincterotomy and balloon extractor passes.

A second episode of acute cholangitis occurred in Ecuador in December 2021. ERCP showed hemobilia and a radiolucent image in the distal common bile duct without extraction of lithiasic material, which was brushed, and a metal stent was inserted. Cytology showed fibrinohematic material without malignancy. After five months, the
patient developed a third acute cholangitis. ERCP showed biliary stent obstruction due to lithiasis, which was resolved with a balloon extractor. Five months later, the patient was admitted for a fourth time due to cholangitis and confirmation of anemia. ERCP showed spontaneous migration of the biliary stent and hemobilia with clots. Direct-vision-cholangioscopy (SpyGlass®) showed an unstable bleeding clot. Urgent computed tomography (CT) angiography showed no collateral circulation in the hepatic or peribiliary hilum and no active bleeding. Conservative management was performed without hemorrhagic recurrence.

In January 2023, she was transferred to our center after developing a fifth acute cholangitis with an episode of hematemesis and hypotension. Urgent CT-angiography showed no active bleeding and hyperdense contents in the bile duct. ERCP showed dilated extrahepatic bile duct with repletion defects (Fig. 1A). The Fogarty-balloon was introduced, washed with serum and the clots were extracted. SpyGlass®-cholangioscopy showed a neoproliferative lesion in the distal common bile duct, 15 mm from the papilla (Fig. 1B), which was suggestive of cholangiocarcinoma. Biopsies were compatible with biliary adenocarcinoma. An extension study confirmed no distant disease. Cephalic duodenopancreatectomy was decided by a multidisciplinary team and the surgical sample was pT2pN2 (Fig. 1C and D).

**Discussion**

The etiology of hemobilia is mainly iatrogenic (> 50 %), followed by traumatic causes. Others are biliopathy due to high portal pressure, or neoplastic or infective (1,2,3,5) biliopathy. In the case of non-clear hemobilia, direct-vision-cholangioscopy can change the management in > 34 % of cases (4). Our patient had episodes of obstructive hemobilia with secondary cholangitis, without objectifying an underlying pathology. When she was referred to our center, SpyGlass®-cholangioscopy identified the suspicious lesion that was compatible with early-stage cholangiocarcinoma, despite the diagnostic delay. In conclusion, it is important to keep in mind the neoformative etiology as a potential cause of hemobilia of unclear origin, in which case, cholangioscopy (SpyGlass®) can contribute to the recognition of the signs of malignancy of the lesion and therefore, to the diagnosis.
References
Fig. 1. Recurrent hemobilia secondary to distal cholangiocarcinoma. A. Moderately dilated extrahepatic bile duct with several repletion defects in its distal portion. B. Neoproliferative and friable lesion in the distal common bile duct (yellow arrow). C. Cephalic duodenopancreatectomy surgical sample where cholangiocarcinoma was objectified (yellow arrow). D. Biliary adenocarcinoma.