We present a case of a 37-year-old man with known ulcerative colitis and primary sclerosing cholangitis. He had been diagnosed at the age of 17 years, but was lost to follow-up for about 15 years. He returned to an outpatient gastroenterologist and was found to have abnormal liver enzyme levels. As part of the work-up he had magnetic resonance cholangiopancreatography (MRCP) that showed a filling defect, measuring 10 mm × 7 mm, in the common hepatic duct. He underwent an endoscopic retrograde cholangiopancreatography (ERCP) with cholangioscopy which revealed a smooth benign-appearing polyp in the common hepatic duct that was causing obstruction of the right intrahepatic system. Biopsy of the mass was performed with a miniature biopsy forceps, and showed denuded fibrous tissue with acute and chronic inflammation without any evidence of carcinoma.

To obtain a better tissue sample for diagnosis and potentially a curative resection, a novel technique was employed in the subsequent ERCP. A 240 cm long 15-mm stiff hexagonal snare (from a Boston Scientific Captivator EMR kit) was used. The plastic sheath of the snare was removed and the naked snare was passed through a cholangioscope and advanced to the common hepatic duct. With this snare, using the cholangioscope catheter as the sheath, the polyp was resected in piecemeal fashion with a hot snare technique under direct and fluoroscopic visualization. The resected specimens were retrieved using a biliary basket. Some residual polyp was left behind; however good drainage was now appreciated from the biliary tree, including the right intrahepatic system. Histological examination of the specimens showed well to poorly differentiated polypoid cholangiocarcinoma. The patient underwent an extended right heptectomy, with the resected specimen revealing a 0.8-cm cholangiocarcinoma, perihilar type, involving the right hepatic duct with invasion into the periductal muscle layer/fibrous tissue without any positive lymph nodes (T1N0Mx). The patient is doing well.

We have described a novel cholangioscopic technique for biliary polyp resection. The technique may be helpful in select cases; however if it is employed, this should be done carefully. Possible complications to consider include bile duct injury/leak and hemobilia, and appropriate contingencies, be they biliary stenting or surgical back-up, should be pre-planned.