Endoscopic treatment of a choledochocele

Choledochal cysts are bile duct anomalies that range from dilatation of the main bile duct to dilatation of the intrahepatic bile ducts (Caroli disease). The choledochocele is a cystic dilatation of the intraduodenal portion of the bile duct, and is designated type III in the Todani classification [1]; it represents less than 5% of all choledochal cysts. When the choledochocele is symptomatic, the incidence of carcinoma is estimated to be 2.5% and this risk increases with age [2]. Treatment by a single endoscopic sphincterotomy does not remove the risk of malignancy.

A 58-year-old woman, with a history of cholecystectomy, presented with acute pancreatitis. The etiological investigation found a choledochocele on magnetic resonance cholangiopancreatography. She was referred to North Hospital for endoscopic resection of the choledochocele.

Endoscopic retrograde cholangiopancreatography (ERCP) showed a 1.0-cm cystic mass to the proximal side of the major papilla, which suggested a type IIIA choledochocele (Video 1). In the first step, a 25×55 mm snare (Cook Medical, Bloomington, Indiana, USA) was deployed around the choledochocele. The snare was adjusted to capture the cystic dilatation and the major papilla, and then a resection was performed using endocut mode.

In the second step, the bile duct was cannulated using a CannulaTome (Cook Medical) in order to place a 10 Fr×9 cm plastic biliary stent (Cook Medical) following biliary sphincterotomy. The pancreatic duct was then cannulated and a 5Fr×3 cm plastic stent (Cook Medical) was placed. The procedure was performed using carbon dioxide insufflation. The procedure was effective at preventing post-ERCP pancreatitis. The resection was performed without complication. The choledochocele was resected completely, and was 11 mm long in the major axis. Histological analysis confirmed the presence of a cystic lesion, with part duodenal and part biliary epithelia, and no tumor or dysplasia evident.