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IMAGE | ENDOSCOPY

Endoscopic Unroofing of a Choledochocele

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CASE REPORT

A 42-year-old man with previous laparoscopic cholecystectomy was referred for further evaluation of recurrent acute pancreatitis. Secretin-enhanced magnetic resonance cholangiopancreatography showed a 16 mm × 11 mm T2 hyperintense cystic lesion at the major papilla (Figure 1). Upper endoscopic ultrasound (EUS) showed a 15 mm × 10 mm oval, intramural, subepithelial lesion at the major papilla (Figure 2). Endoscopic retrograde cholangiopancreatography (ERCP) showed an 18-mm bulging lesion at the major papilla with normal overlying mucosa (Figure 3); injected contrast collected into a 16-mm cystic cavity (Figure 4). Findings were suggestive of type A choledochocele. A 10–12-mm freehand precut papillotomy was made with a monofilament needle-knife (Huibregtse Single-Lumen Needle Knife, Cook Medical, Bloomington, IN) using an ERBE VIO electrocautery system (ERBE USA; Marietta, GA). The incision was made as long as safely possible in an attempt to open the choledochocele completely and thus expose its walls and contents. We used a standard pull sphincterotome and ERBE electrocautery to perform the pancreatic sphincterotomy, followed by placement of a pancreatic stent. Biliary sphincterotomy was performed using the same technique (settings for needle-knife and pull sphincterotomies: Endocut I, blend current, effect 2/duration 2/interval 3). Biopsies of the inverted choledochocele showed biliary mucosa and duodenal columnar epithelium with inflammation and fibrosis, and no dysplasia. Follow-up

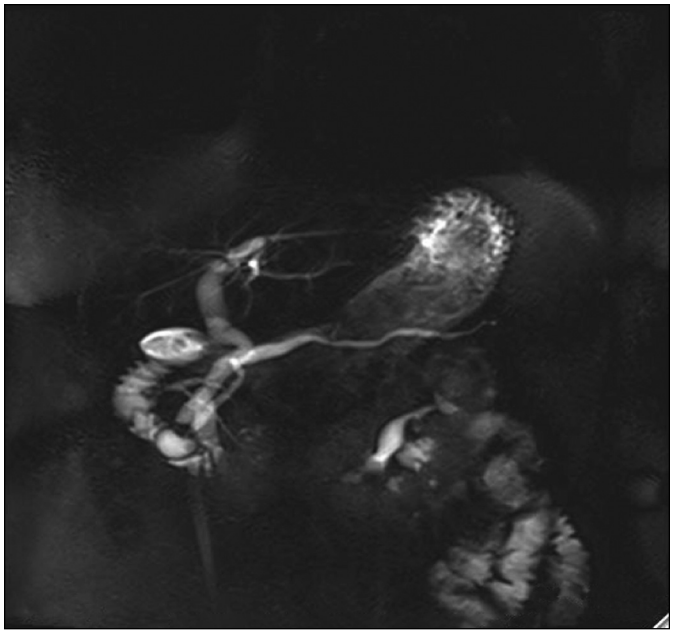

Figure 1. Secretin-enhanced magnetic resonance cholangiopancreatography showed a T2 hyperintense cystic lesion at the major papilla communicating with the common bile duct and the pancreatic duct. No anomalous pancreatico-biliary junction was noted.

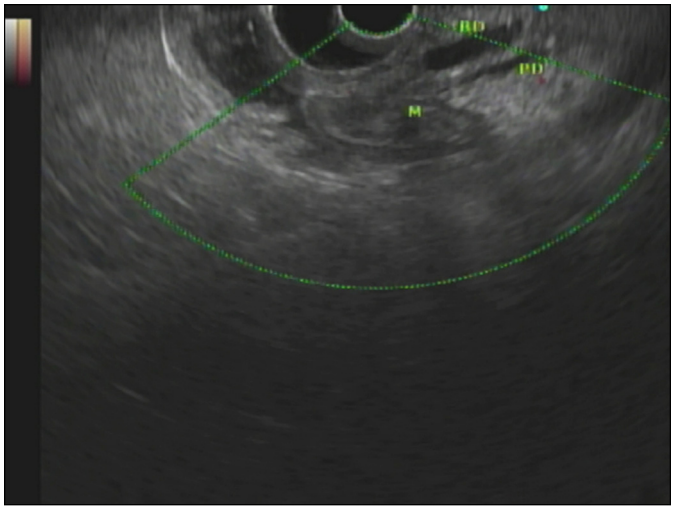

Figure 2. Endoscopic ultrasound showed an intramural (subepithelial), heterogeneous, mixed (cystic and solid), hypoechoic (with anechoic center) lesion at the major papilla. This appeared to be in communication with the common bile duct and the pancreatic duct.

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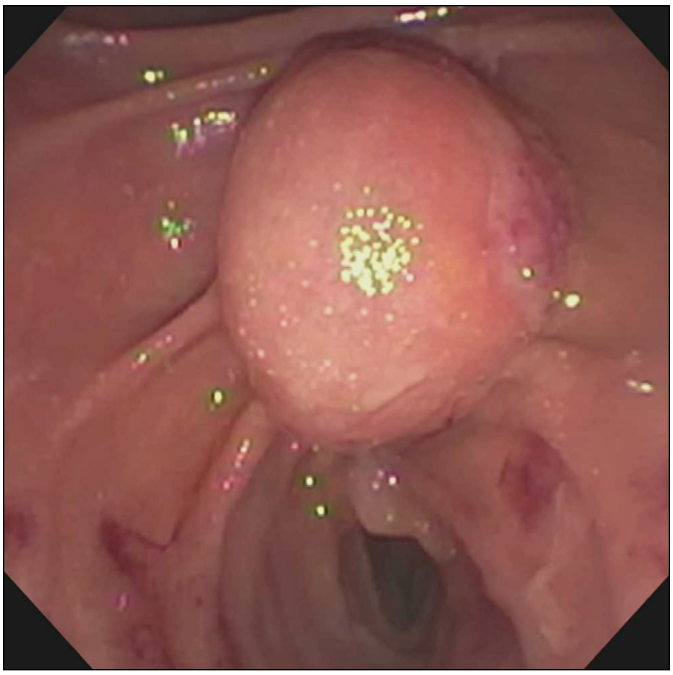

Figure 3. Endoscopy showed a large bulging lesion with normal overlying mucosa at the major papilla.

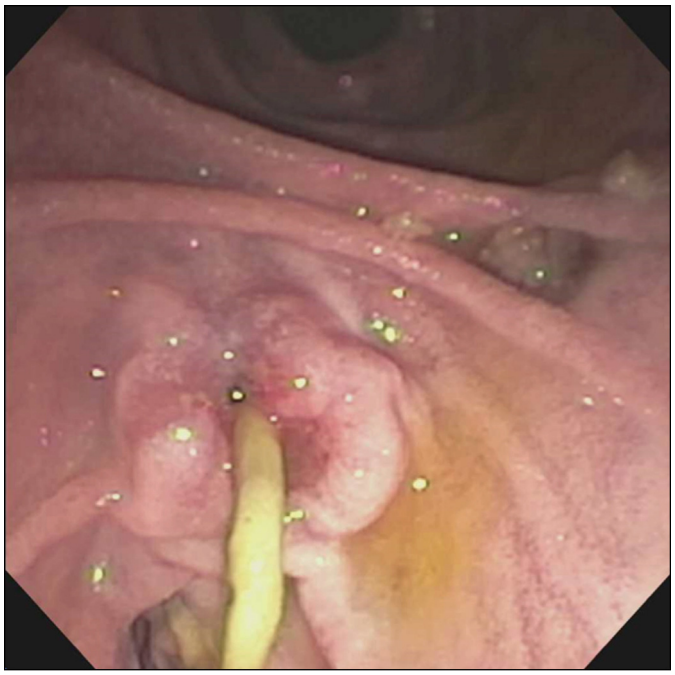

Figure 5. Endoscopy showed adequate unroofing of the previously diagnosed type A choledochocele.

ERCP at 4 weeks showed adequate unroofing of the choledochocele (Figure 5); the pancreatic stent was subsequently removed. The patient reported no recurrence of acute pancreatitis at 6-, 12-, and 18-month follow-up intervals.

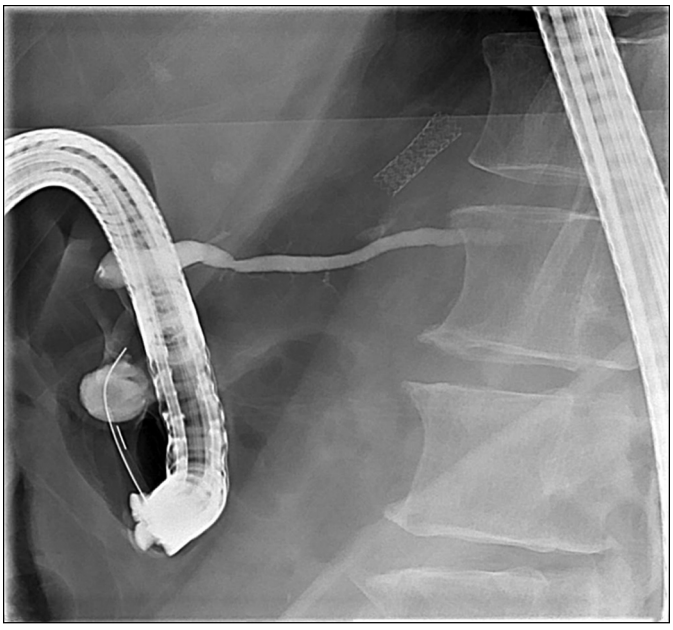

Figure 4. Endoscopic retrograde cholangiopancreatography showed cystic dilatation of the intraduodenal portion of the common bile duct and the pancreatic duct. No anomalous pancreatico-biliary junction was noted.

Choledochoceles, or type III choledochal cysts, are uncommon. They frequently present at an older age, with an average age at presentation of 51 years.[1,2] No female predominance is reported. Choledochoceles can be congenital or acquired, and are further classified as type A (intraluminal with common opening for the common bile duct and pancreatic duct), type B (intraluminal with separate openings for the common bile duct and pancreatic duct), and type C (completely intramural).[3] Choledochoceles are usually not associated with biliary malignancy, although some reports show a higher (2.5–27%) risk of malignancy (ampullary and periampullary) associated with choledochoceles.[4-6] Therefore, a close follow-up of these patients is mandatory using EUS/ERCP, biopsy, and cytology.[3] The best interval and overall duration of endoscopic surveillance are unknown; some authors suggest evaluation at 6–12 months after the index endoscopic procedure.[2,6] Until recently, surgical transduodenal cyst excision with or without sphincterotomy had been the treatment of choice for choledochoceles. At present, however, ERCP with endoscopic unroofing provides an optimal alternative to surgery.[1,2]

DISCLOSURES

Author contributions: II El Hajj wrote the manuscript, reviewed the literature, and is the article guarantor. GA Lehman, T. Tirkes, and S. Sherman edited the manuscript.

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