Cystic duct remnant syndrome: endoscopic approach to management

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Postcholecystectomy syndrome (PCS) with recurrence of pain and dyspepsia can be caused by various biliary and extrabiliary conditions.[1] Biliary causes of PCS include iatrogenic bile duct injury, bile leak, recurrent or retained choledocholithiasis, biliary dyskinesia, and biliary strictures.[2] Here we describe a case of cystic duct remnant syndrome, which is a rare cause of PCS.[3]

A 63-year-old man presented to the emergency department with dull epigastric pain. The patient had a history of choledocholithiasis and had undergone ERCP with biliary sphincterotomy followed by laparoscopic cholecystectomy for gallstone disease 14 months before presentation. A CT scan was notable for a newly dilated common bile duct (CBD) with a possible obstructing stone in the CBD (Fig. 1A). EUS showed a dilated cystic duct containing a 13-mm oval-shaped stone with a nondilated CBD (Fig. 1B). ERCP and occlusion cholangiography showed a normal biliary tree without dilation (Fig. 1C),

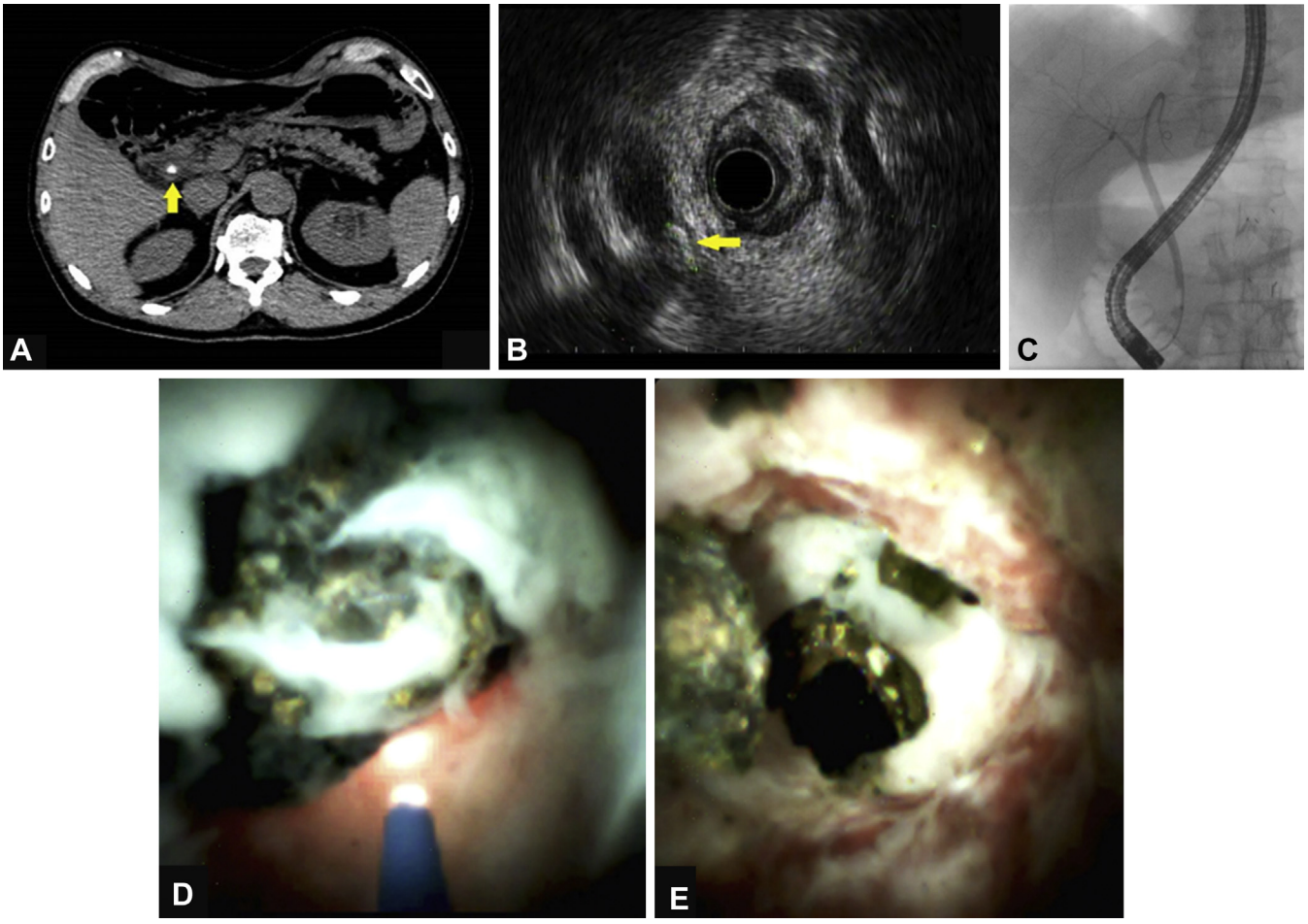

Figure 1. A, CT view suggesting a common bile duct stone. **B, C,** EUS views showing a 13-mm cystic duct stone, but the cystic duct could not be accessed during the initial ERCP. **D,** Cholangioscopic view during the second ERCP showing a large cystic duct stone. **E,** Dilated and inflamed cystic duct after Holmium laser lithotripsy; stone fragments can be seen.

but the cystic duct could not be opacified. A decision was made to repeat the ERCP the next day to attempt cholangioscopy and lithotripsy of the cystic duct stone.

During the subsequent ERCP, cholangioscopy revealed a large impacted stone in the cystic duct remnant with inflamed mucosa of the cystic duct remnant (Fig. 1D). Laser lithotripsy was performed under direct visual guidance until the stone was fragmented into small pieces (Fig. 1E; Video 1, available online at www.VideoGIE.org). A 10F plastic stent was placed into the cystic duct, and a 7F plastic stent was placed into the CBD. The patient was discharged after overnight observation, with a short course of oral antibiotics. The patient reported resolution of his symptoms during outpatient follow-up. A repeated ERCP and cholangioscopy after 1 month showed no evidence of residual stone, and the stents were removed.

Cystic duct remnant syndrome, defined as symptoms of upper-abdominal pain and dyspepsia caused by a dilated remnant cystic duct after cholecystectomy, is a rare cause of PCS[3] and is the result of ductal inflammation or retained or recurrent stones. As seen in this case, CT can be of limited use for the diagnosis of cystic duct remnant syndrome; careful EUS examination, or magnetic resonance cholangiography, is important in making the correct diagnosis.[2] Conventionally, open or laparoscopic surgery has been used to treat these patients,[4] but a less-invasive approach with ERCP could be a safe and effective treatment option.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviations: CBD, common bile duct; PCS, postcholecystectomy syndrome.

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https://doi.org/10.1016/j.vgie.2019.08.013