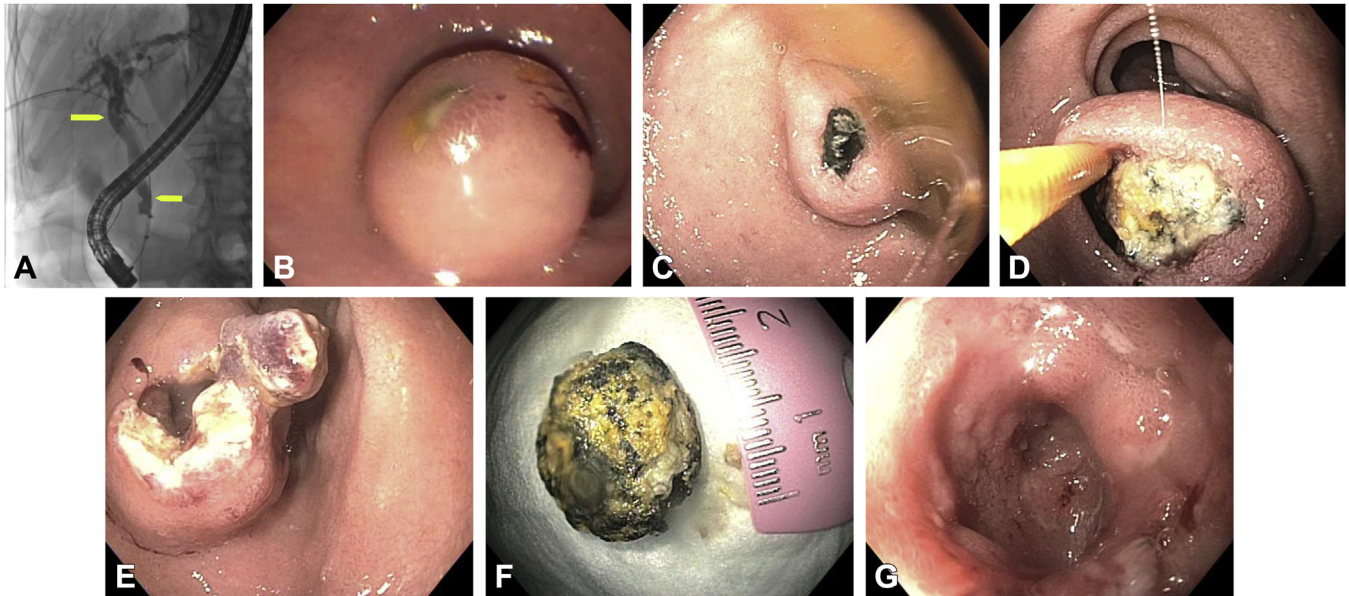




## Electroincision and extraction of a gallstone from the duodenal wall for the prevention of gallstone ileus



**Figure 1.** **A**, Cholangiogram demonstrating small distal common bile duct filling defects, consistent with stones. **B**, Ulcerated subepithelial mass in the duodenal bulb. **C**, Visible gallstone in prior “mass” noted in the duodenal bulb. **D**, Unroofing of the mucosa to expose and extract embedded gallstone. **E**, Duodenal bulb after removal of embedded gallstone. **F**, Large (20 mm) gallstone removed. **G**, Examination of cavity after stone removal; no patent fistulous tract identified.

An 80-year-old woman with an extensive medical history including appendiceal carcinoid, previous ileocolonic resection, and prior choledocholithiasis was referred for management of persistent choledocholithiasis and chronic diarrhea. The patient initially presented with symptomatic choledocholithiasis 2 years earlier. ERCP was performed, with plastic biliary stent placement. The patient was lost to follow-up, returning 1 year later with presumed biliary sepsis. Repeated ERCP was performed with stent removal; however, stone clearance was incomplete given a lack of expertise and equipment at the outside facility. The patient therefore underwent placement of percutaneous transhepatic biliary drainage (PTBD). During ERCP, concern for possible cholecystoenteric fistula was raised. After referral to our institution, the PTBD was removed, and ERCP was performed for ductal clearance.

ERCP revealed choledocholithiasis (Fig. 1A). Complete stone clearance was achieved by balloon extraction through a pre-existing biliary sphincterotomy. No evidence of cholecystoenteric fistula was identified. Endoscopic

examination revealed a firm, 25-mm ulcerated subepithelial mass in the duodenal bulb, which aroused concern for malignant carcinoid (Fig. 1B). Stacked biopsy specimens were obtained but were nondiagnostic.

The patient returned to undergo EUS with FNA for further evaluation of the duodenal lesion. The duodenal mass appeared more ulcerated, allowing visualization of a suspected retained gallstone (Fig. 1C). The embedded gallstone was thought to be the result of fistula formation during a prior episode of cholangitis and presumed cholecystitis. The overlying mucosa was unroofed and extracted by use of a combination of a needle-knife papillotome and a ceramic-tipped electro-surgical knife (Figs. 1D and E) (Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)). Given the large stone size, the stone was retrieved (Fig. 1F), inasmuch as stones >20 mm have been known to increase the risk of gallstone ileus or outlet obstruction, clinically known as Bouveret syndrome. The cavity was examined, but no patent fistula was identified (Fig. 1G). The patient tolerated the

Written transcript of the video audio is available online at [www.VideoGIE.org](http://www.VideoGIE.org).

procedure well and was referred for cholecystectomy to prevent further gallbladder adverse events.

## DISCLOSURE

*Dr Law is the recipient of travel support from Tae-woong. Dr Elta is a consultant for Olympus America. The other author disclosed no financial relationships relevant to this publication.*

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<https://doi.org/10.1016/j.vgie.2018.01.003>

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