Combined Spyglass Choledochoscopy and Laparoscopic-Assisted-ERCP retrieval of an Obstructing Choledocholith

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Introduction

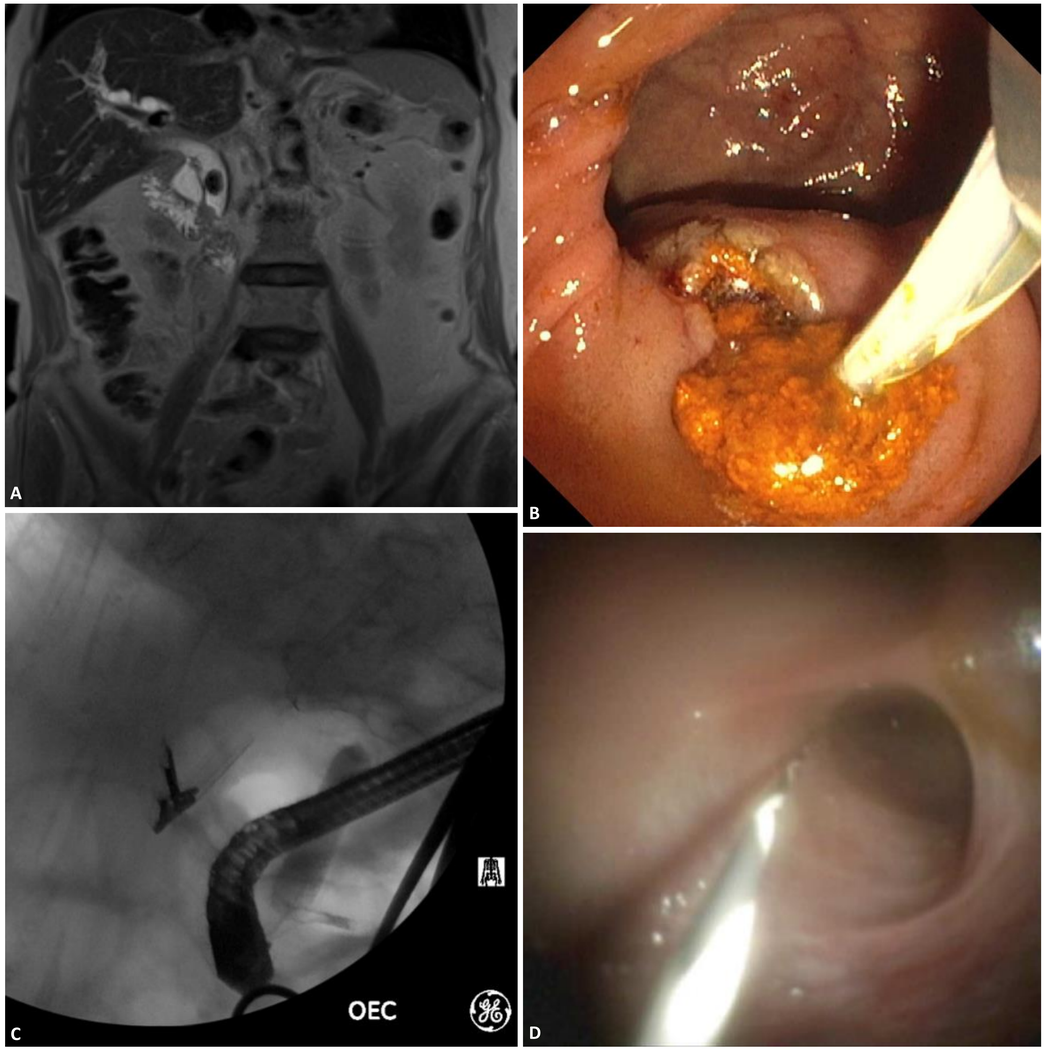
Transoral access to the biliary tree is often not feasible after Roux-en-Y gastric bypass [RYGB]. Endoscopic, percutaneous, laparoscopic, and open techniques have been described to assist with endoscopic access to diagnose and treat biliary pathology[1]. The incidence of choledocholithiasis requiring intervention in RYGB patients is rare at 0.9-1.2%, and this rate is even rarer in patients who have had prior cholecystectomy[2]. When treatment options are limited due to the presence of extensive adhesions precluding operative access to the common bile duct, novel techniques may be considered. We present our 76-year-old female who presented with primary obstructing choledocholithiasis.

Presentation

- 76-year-old female with several months of nonspecific right upper quadrant pain
- Past surgery: 1980s open cholecystectomy; 2005 open Roux-en-Y gastric bypass
- WBC 3.94; Cr 1.57; Tbili 0.6; Alk Phos 955; AST 155; ALT 131
- MRCP imaging showing choledocholithiasis with a 1.5cm stone and biliary ductal dilatation

Procedure

- Laparoscopic lysis of extensive adhesions
- Retrocolic roux limb lateralized to expose the gastric remnant
- Sutures placed to elevated remnant stomach and enclose a 15mm transgastric port
- Laparoscopic-assisted-ERCP [LA-ERCP] sphincterotomy with stone extraction and completion retrograde spyglass choledochoscopy
- Partial gastrectomy to close access site
- Uneventful postoperative course, discharged postoperative day 2



A MRI showing choledocholith and dilated biliary system. B LA-ERCP view of stone extraction. C intraoperative fluoroscopy depicting dilated common bile duct and clips from prior cholecystectomy. D Intraoperative choledochoscopy view of the common bile duct showing complete clearance

Discussion

- 12.5% of RYGB patients with choledocholithiasis & required therapeutic intervention were also status post cholecystectomy[2]
- Techniques and their success rates:
  - Single-balloon ERCP 50-70%[1, 3]
  - Double-balloon ERCP 63-83%[1, 3]
  - Hybrid technique [LA-ERCP] 83-100%[1, 4]
  - Laparoscopic transcystic duct exploration 81-100%[1, 3, 5]
  - Laparoscopic transcholedochal bile duct exploration 83-96%[1]
  - U/S-directed transgastric ERCP [EDGE] 97%[3]
  - EUS-guided intra-hepatic puncture w/ antegrade clearance 74%[3]
  - Rendezvous guidewire-associated ERCP 87-100%[3]
  - Percutaneous trans-hepatic biliary drainage 100%[3]
- Complications are infrequent with low morbidity and include post-operative pancreatitis, perforation, hospital readmission, chronic pain[1, 4]
- Spyglass choledochoscopy is utilized frequently to assist with cholecystectomy and choledocholithiasis in the non-RYGB patient population
- Retrograde choledochoscopy was utilized effectively in our patient case when laparoscopic access to the biliary system was unavailable

References

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