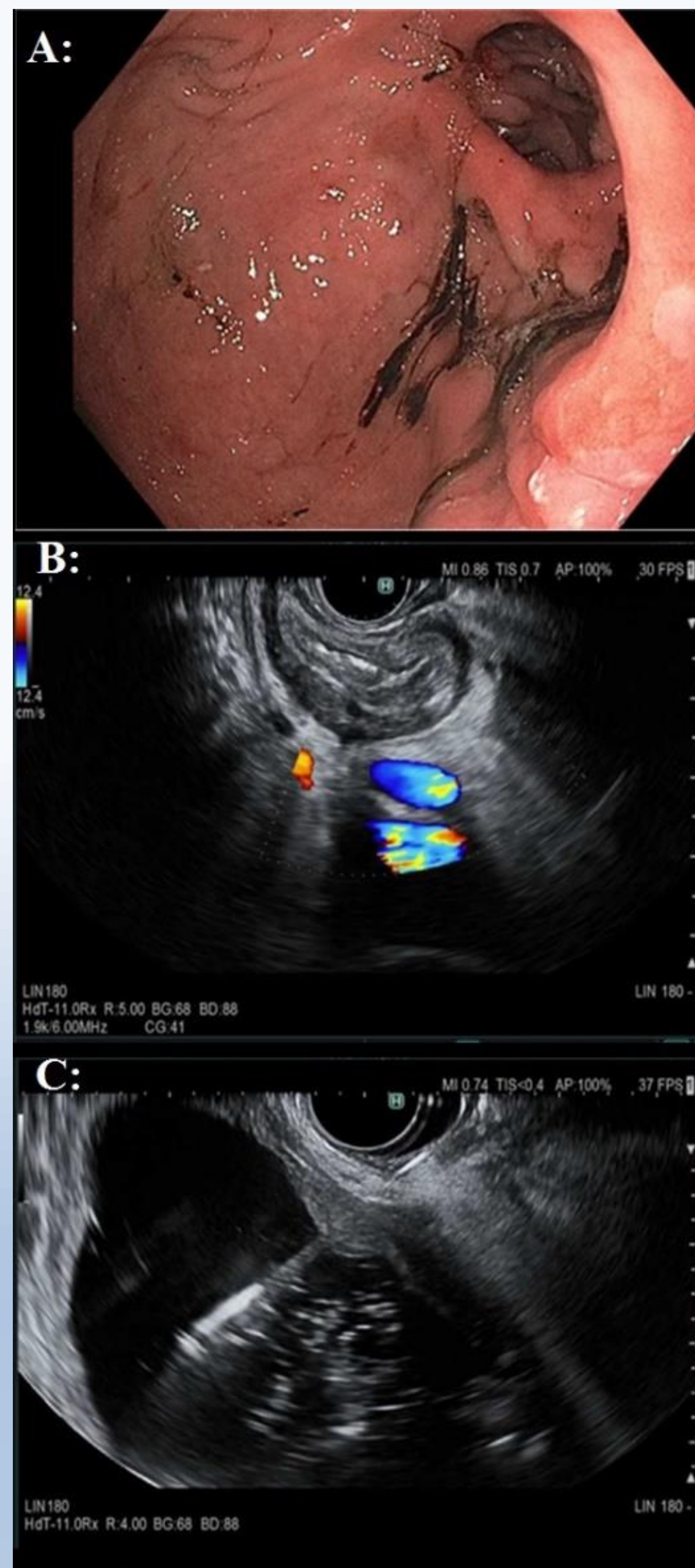


Introduction

- Due to rise in obesity, there has been an increased number of gastric bypass surgeries. Around 36% morbidly obese patient develop cholelithiasis or choledocholithiasis (CDL) in their lifetime.
- Due to the anatomy, a conventional Endoscopic Retrograde Cholangio Pancreatography (ERCP) is often challenging and not possible. We present a case of an altered anatomy ERCP in a patient with CDL and Roux-en-Y gastric bypass (RYGB) who underwent Endoscopic ultrasound Directed trans-Gastric ERCP (EDGE) procedure.

Case Description

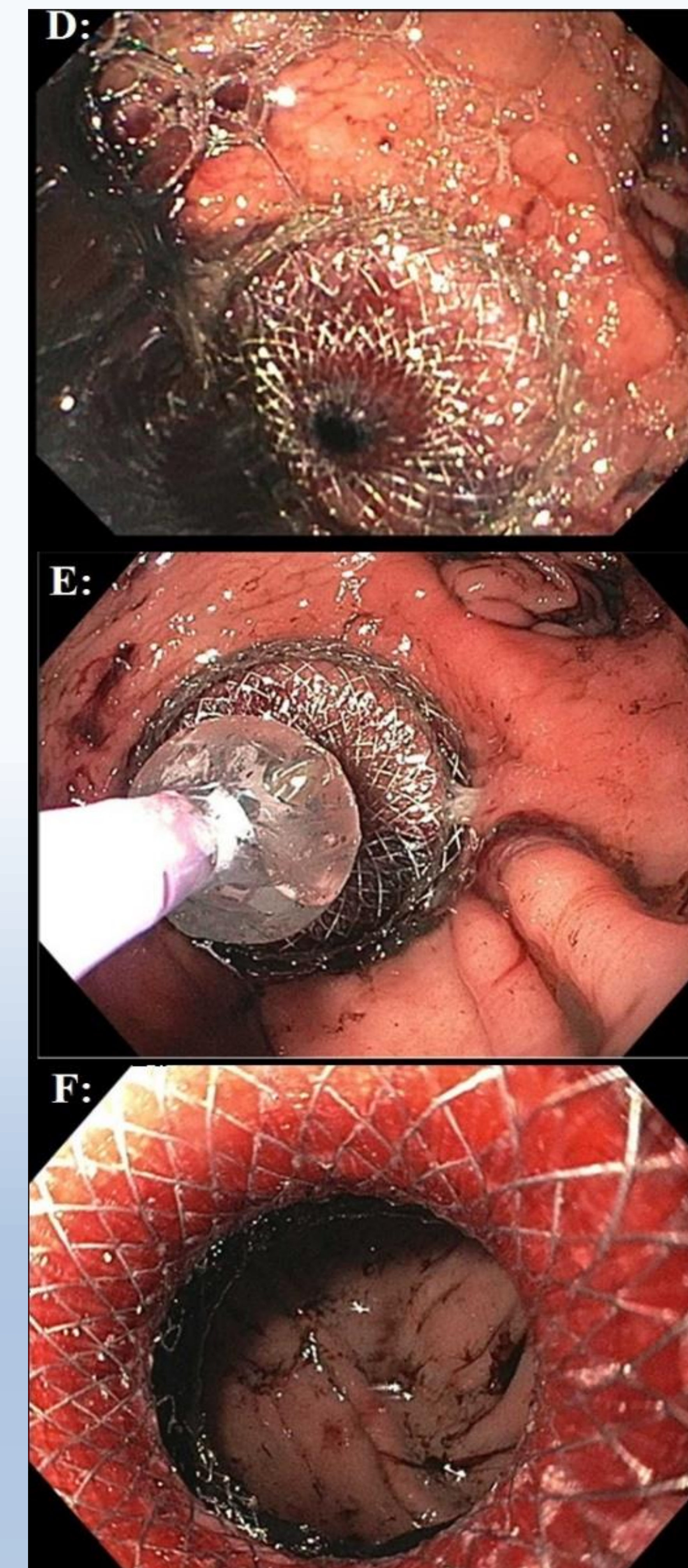
- A 69-year-old female with a PMH of RYGB admitted for Hartmann's procedure. During the hospitalization, she complained of RUQ pain and CT abdomen showed a distended gallbladder with cholelithiasis and CBD dilation of 8.3mm; MRCP confirmed five or more CDL.
- A traditional attempt at an ERCP using a pediatric colonoscope was unsuccessful in reaching the papilla. She underwent cholecystectomy with an IOC re-demonstrating the CDL.
- Options were to do a laparoscopy assisted ERCP v/s double balloon assisted ERCP v/s EDGE.
- Due to already multiple surgeries patient opted for EDGE procedure.
- For stage 1 of the EDGE, the excluded stomach was identified under EUS and punctured using a 19-gauge-needle followed by a radiocontrast dye injection into the excluded stomach confirmed under fluoroscopy. (Figure C) Subsequently, a guidewire was advanced through the needle into the pylorus and duodenum to verify the patency of pylorus. After confirming access to the excluded stomach, a 20 x 10 mm (AXIOS™) lumen apposing metal stent (LAMS) was placed and a gastro-gastric fistula between the gastric pouch and the excluded stomach was formed.(Figure D) The lumen of the stent was subsequently dilated using a CRE balloon confirming the direct visualization of the gastric rugae. (Figure E,F).
- The LAMS was left for 4 weeks for the tract to mature. Stage 2 of the EDGE procedure was then completed by passing the duodenoscope through the LAMS and completion of the traditional ERCP followed by removal of the LAMS. Overall patient did well.



A: EGD showing gastric pouch post-RYGB

B: EUS suggests decompressed excluded stomach

C: Injecting contrast into the excluded stomach - to make cystic cavity



D: 20 x 10 mm(AXIOS) lumen apposing metal stent placement

E: CRE Balloon dilation of LAMS

F: Confirmed visualization of excluded gastric mucosa - gastrogastric fistula

Discussion

- There has been high failure rates with post-procedural complications from transoral approach using enteroscope and surgical approach with laparoscopy-assisted ERCP.¹
- EDGE is a minimally invasive EUS guided technique for doing an ERCP in patients with RYGB. Comparison studies have shown EDGE to have similar or better technical success when compared to laparoscopy-assisted ERCP and balloon Enteroscopy-assisted ERCP.^{2,3}
- Due to the high technical skill required in doing an EDGE, it is best advisable to offer this at institutions where a trained advanced endoscopist well versed with a therapeutic EUS is available.^{2,3}

References

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