

Introduction

- Cholecystocolonic fistulas (CCFs) most commonly occur as a sequela of gallstone disease but associations with malignancy, peptic ulcers, and inflammatory bowel disease have been reported.
- Classic triad of chronic diarrhea, vitamin K malabsorption, and pneumobilia has been proposed.
- Definitive management involves cholecystectomy, fistula resection, and common bile duct exploration

Case Details

A 50 year old male presented with abdominal pain. CT scan noted acute cholecystitis. He underwent laparoscopic converted to open subtotal cholecystectomy due to significant inflammation around the gallbladder.

He represented 3 weeks later for abdominal pain. CT showed stump cholecystitis and choledocholithiasis. Gastroenterology was consulted for EUS-GBD given his poor surgical candidacy. Transgastric EUS-GBD with a 10 x 10 mm lumen apposing metal stent (LAMS) was then performed followed by double pigtail (DPT) stent placement into the gallbladder through the LAMS. ERCP with biliary sphincterotomy, cholangioscopy, EHL, and stone removal was completed.

At a follow up visit, he reported diarrhea. Upper endoscopy 4 weeks after EUS-GBD revealed a CCF with one end of the DPT stent in the colon (Figure 1). Cholecystoscopy confirmed absence of gallstones so both stents were removed and through the scope clips were used to close the cholecystogastric tract. Oral contrasted CT showed tethering of the gallbladder to the hepatic flexure but no contrast leak into the gallbladder from the stomach (Figure 2).

Due to the presence of a patent biliary tree with prior biliary sphincterotomy and no history of cholangitis, clinical observation was pursued. Colonoscopy at 4 weeks post stent removal did not show a fistulous connection at the hepatic flexure (Figure 3). Diarrhea had subsequently resolved.

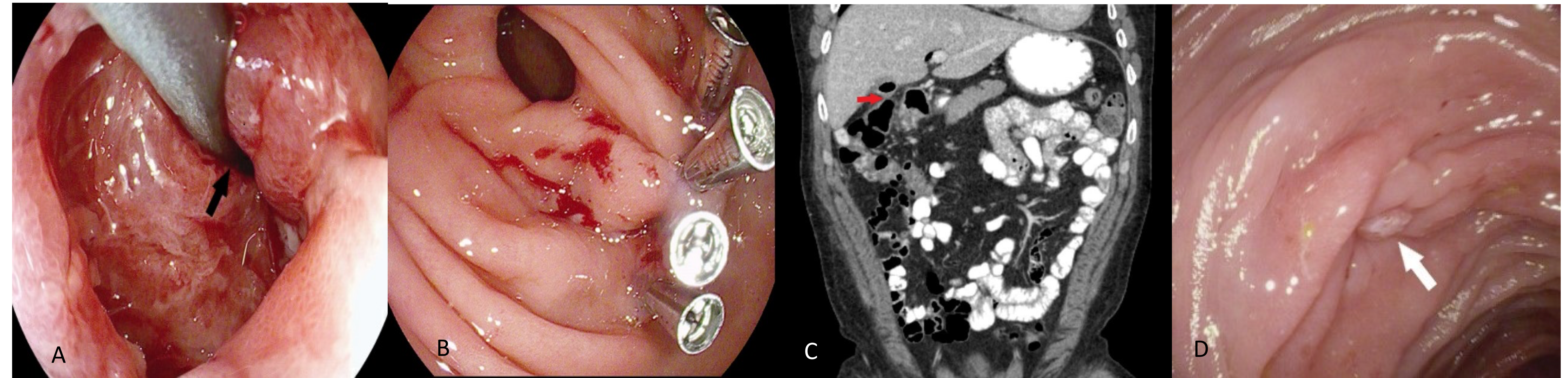


Figure 1 Cholecystocolonic fistula noted after EUS-GBG. **(A)** Plastic double pigtail stent migrated into the colon via cholecystocolonic fistula (black arrow) as viewed from the gallbladder. **(B)** Closure of cholecystogastric tract with clips. **(C)** Tethering of the hepatic flexure to the remnant gallbladder (red arrow) without contrast leak into the gallbladder from the stomach. **(D)** Closed cholecystocolonic fistula (white arrow) viewed from the hepatic flexure.

Discussion

- The pathophysiology behind fistula formation involves chronic inflammation with subsequent tissue ischemia, ulceration, and fistula formation.
- In our case, fistula creation was believed to be secondary to inflammation from chronic cholecystitis in addition to mechanical trauma from the indwelling DPT stent and LAMS. This is the first reported case of a CCF after EUS-GBD.
- Surgical management is preferred but is not feasible in all patients.
- Endoscopic therapies focused on the treatment of acute cholecystitis while maintaining transpapillary biliary drainage can aid in fistula closure in non-surgical patients.

References

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