

Closure of Bilo-Enteric Fistula Using Combination of Endoscopic Suturing and Over-The-Scope Clip Placement



Taiwo Ajose, MD¹, Krystal Mills, MD³, Nicholas McDonald, MD¹, Idowu Ajose, MBBS²,
Bryant Megna, MD¹, Mohammad Bilal, MD^{1,4}

¹Division of Gastroenterology and Hepatology, University of Minnesota, Minneapolis, MN, ²Department of Internal Medicine, University of Minnesota, Minneapolis, Minnesota, ³Department of Internal Medicine, Morehouse School of Medicine Atlanta GA, ⁴Division of Gastroenterology and Hepatology, Minneapolis VA Medical Center.

UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

INTRODUCTION

- Bilo-enteric fistulas are an uncommon complication after placement of percutaneous biliary drains.
- Most reports describe surgical management for bilo-enteric fistulas and reports of these fistulas managed endoscopically are rare.
- Here, we report a case of a bilo-enteric fistula which was managed by combination therapy with endoscopic suturing and over-the-scope-clip.

CASE DESCRIPTION

- A 75-year-old man underwent laparoscopic cholecystectomy for acute cholecystitis, which was complicated by injury to the common bile duct
- Conversion to an open cholecystectomy and Roux-en-Y hepaticojejunostomy was required.
- After discharge, he returned with an ongoing bile leak and interventional radiology (IR) placed an internal-external biliary drain across the hepaticojejunal anastomosis.
- Following IR drainage, he had persistent fever and leukocytosis. Imaging revealed a perihepatic abscess and biloma.
- He underwent an additional IR-guided percutaneous drain placement into the biloma.
- Subsequently, cholangiogram revealed bile leak at the hepaticojejunostomy with extension of contrast into the proximal duodenum concerning for a fistulous communication between the duodenum and biloma.
- After multidisciplinary discussion, the decision was made to evaluate the fistulous communication with esophagogastroduodenoscopy (EGD).
- An EGD was performed and the previously placed external drain was seen fistulized into the duodenal bulb [Figure 1A].
- The external drain was pulled back outside the duodenal lumen. The fistulous opening was 15 mm in size.
- Argon plasma coagulation of the tract edges was performed to facilitate tissue healing and closure followed by endoscopic suturing to close the tract [Figure 1B].

- Endoscopic suturing was performed using the OverSitch device and one suture was placed in a figure of eight fashion.
- However, a 3-mm opening was seen immediately distal to the pylorus even after cinch placement [Figure 1C].
- To close the remaining defect, a 12-mm in diameter over-the-scope clip was placed [Figure 1D].
- Following closure, there was no residual contrast leakage confirming successful closure of the fistula.
- The external drain was subsequently removed without evidence of biloma re-accumulation on follow-up imaging.

DISCUSSION

- Our report highlights that a combination of endoscopic suturing and over-the-scope clip closure approach can be a potential endoscopic option for managing bilo-enteric fistulas.

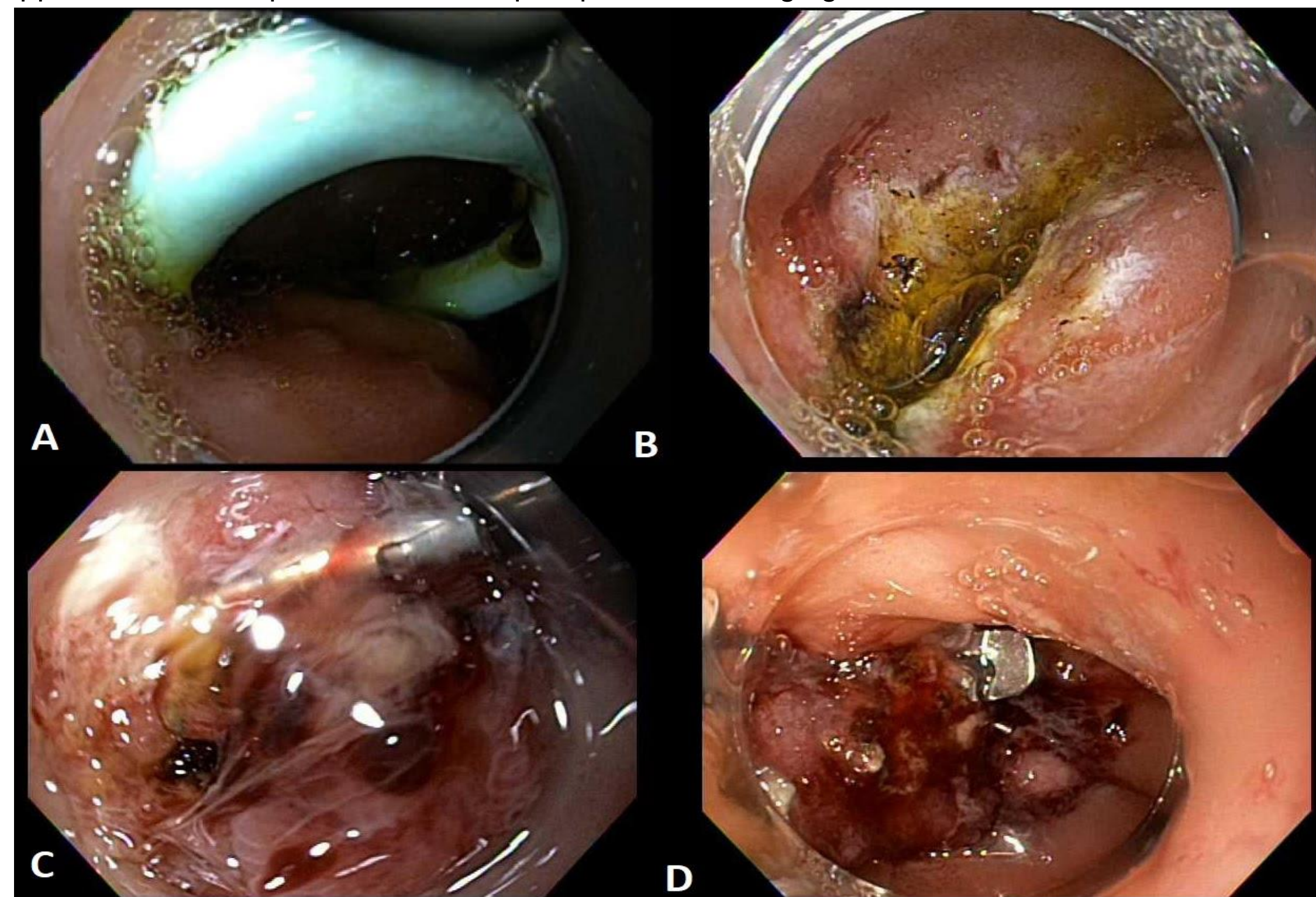


Figure 1A- External drain seen fistulized into the duodenal bulb. Figure 1B- Argon plasma coagulation is applied to the fistula edges to promote tissue healing. Figure 1C- Fistula is closed using endoscopic suturing. Figure 1D- Over-the-scope clip is placed for complete closure of fistula