

EUS-guided hepaticojejunostomy for biliary obstruction in near-total gastrectomy with Roux-en-Y: Trials and tribulations (with videos)

Jeong Hoon Kim,* Jade Wang, Kamal M. Hassan, Reem Z. Sharaiha, Srihari Mahadev, Kartik Sampath

EUS-guided hepaticogastrostomy is utilized for biliary drainage in complex cases. EUS-guided hepaticojejunostomy (EUS-HJ) can be considered in cases of near-total gastrectomy. Technical considerations include jejunal diameter, fibrotic tissue, and angulated access points to the intrahepatic ducts.^{1,2} We present a challenging case of EUS-HJ to treat malignant biliary obstruction in a patient with gastric cancer and near-total gastrectomy with Roux-en-Y reconstruction.

Endoscopy revealed a healthy esophagus, minimal gastric pouch, and jejunal reservoir [Figure 1]. EUS noted dilation of intrahepatic ducts. Left intrahepatic ducts (LIHDs) were accessed with a 19-gauge needle. Contrast cholangiogram confirmed a dilated biliary tree [Figure 2]. Despite HJ tract dilation with a 4-mm balloon, attempts to transverse the tract with a fully covered self-expanding metal stent (FCSEMS) with flexible tapered tip were unsuccessful [Video 1]. Then, unexpectedly, the fluoroscopy monitor blacked out. Despite the efforts of endoscopy staff to fix the monitors as quickly as possible, 20 minutes elapsed before monitoring resumed. Upon resumption, scope and EUS position were altered. The delay may have led to unnecessary bile leakage as the HJ tract had just been dilated. The scope and EUS were promptly readjusted. A stiff catheter tip, 10 mm × 8 cm, FCSEMS successfully traversed the HJ tract, with the distal end in the LIHD and proximal end in the jejunum, and an anchoring 7F × 15-cm double pigtail stent was placed within the FCSEMS [Video 2].

Video 1

Attempt to traverse the hepaticojejunal tract. Videos are only available at the official website of the journal (<http://www.eusjournal.com>).

Video 2

Successful placement of self-expanding metal stent into the hepaticojejunal tract. Videos are only available at the official website of the journal (<http://www.eusjournal.com>).

Jeong Hoon Kim and Jade Wang contributed equally to this work. Weill Cornell Medicine, New York, NY, USA.

* Address for correspondence: 1320 York Ave Apt 29Y, New York, NY 10021. E-mail: jhn.kim99@gmail.com (J. H. Kim).

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The FCSEMS was readjusted by using rat-tooth forceps to pull it more lumenally [Video 3]. A second 10 mm × 8-cm FCSEMS was placed within the original FCSEMS to prevent overcorrection [Video 4]. The distal end of the second FCSEMS was noted securely in LIHDs and the proximal end within the original FCSEMS [Figures 3,4]. There were no complications. Bilirubin normalized postprocedure.

Video 3

Adjustment of stent with rat-tooth forceps. Videos are only available at the official website of the journal (<http://www.eusjournal.com>).

Video 4

Insertion of second self-expanding metal stent into the hepaticojejunal tract. Videos are only available at the official website of the journal (<http://www.eusjournal.com>).

This case demonstrates that EUS-HJ is a safe, feasible technique for biliary decompression even in the setting of uniquely complex, surgically altered anatomy with considerable fibrosis. The case also highlights unique pitfalls of EUS-guided biliary drainage when certain endoscopic unit equipment/medical devices fail. It is important to anticipate and troubleshoot these issues when unforeseen circumstances inevitably occur.

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Conflicts of Interest

Reem Z. Sharaiha is a consultant for Boston Scientific and Cook. Srihari Mahadev is a consultant for ConMed and Boston Scientific. Kartik Sampath is a consultant for ConMed. The remaining authors declare that they have no financial conflict of interest with regard to the content of this report.

Author Contributions

Jeong Hoon Kim, Jade Wang, and Kamal M. Hassan designed the project, wrote the paper, and edited the video. Reem Z. Sharaiha, Srihari Mahadev, and Kartik Sampath designed project, supervised writing/editing of paper and video.

References

- Mukai S, Tsuchiya T, Itoi T. Interventional endoscopic ultrasonography for benign biliary diseases in patients with surgically altered anatomy. *Curr Opin Gastroenterol* 2019;35:408–415.
- Ueshima K, Ogura T, Nishioka N, et al. Technical feasibility of EUS-guided antegrade dilation for hepaticojejunostomy anastomotic stricture using novel endoscopic device (with videos) [published correction appears in *United Eur Gastroenterol J* 2022 ;10(6):605]. *United European Gastroenterol J* 2019; 7(3):419–423. doi:10.1177/2050640618823662. Epub January 14, 2019.

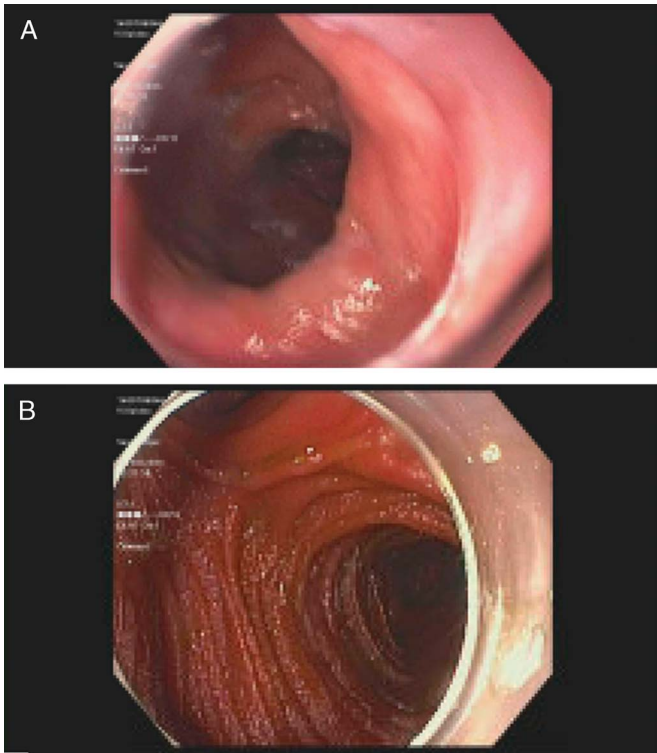


Figure 1. A healthy esophagus with minimal 1-cm gastric pouch (A) and jejunal reservoir (B) were noted on endoscopy.

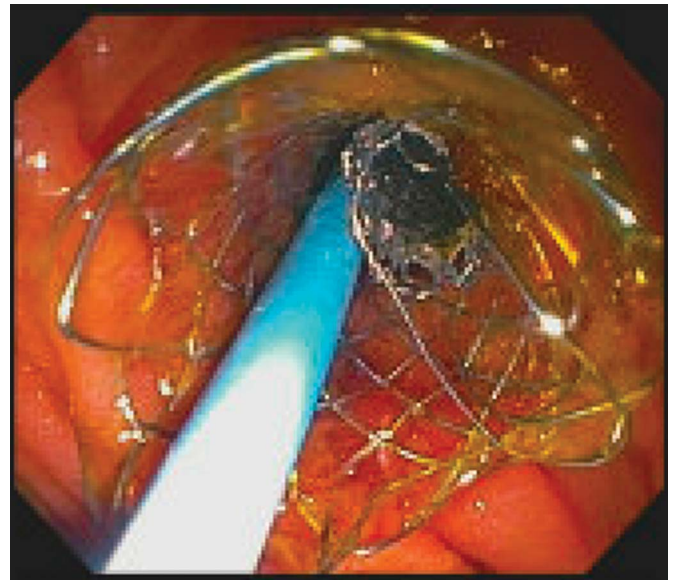


Figure 3. The distal end of the second bridging fully covered self-expanding metal stent was noted securely in the left intrahepatic ducts and the proximal end within the original fully covered self-expanding metal stent.



Figure 2. Contrast cholangiogram confirmed a dilated biliary tree after the left intrahepatic ducts were accessed with a 19-gauge needle.

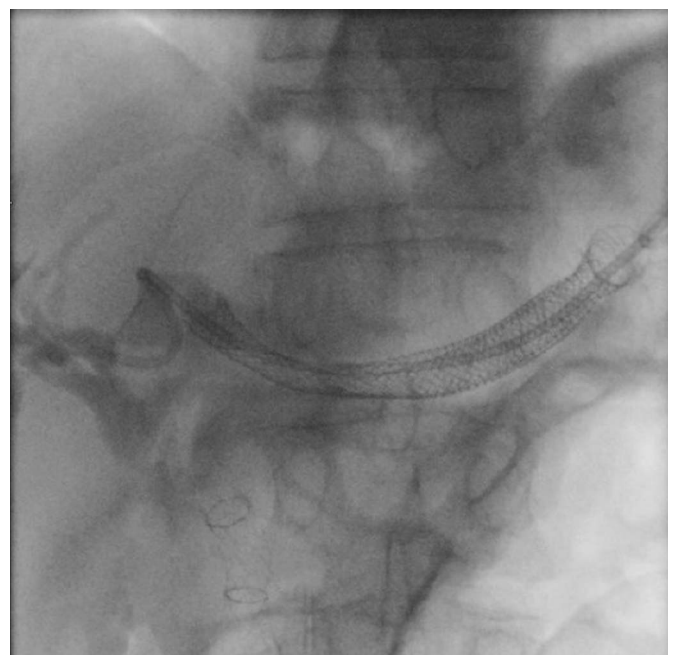


Figure 4. Fluoroscopy confirming proper stent position.