Sterile laparoscopic transgastric ERCP with single-use disposable duodenoscope

► **Fig. 1** Magnetic resonance cholangiopancreatography shows the stone in the common bile duct.

Laparoscopically assisted transgastric endoscopic retrograde cholangiopancreatography (ERCP) is a common interventional procedure in patients with biliary disease and altered anatomy due to Roux-en-Y gastric bypass [1–3]. After access to the stomach, the operation field needs to be widely redraped to proceed with nonsterile ERCP. However, converting from the sterile to a nonsterile setting has become unnecessary with the introduction of single-use disposable duodenoscopes [4,5]. The entire procedure can now be performed in a sterile manner.

A 66-year-old woman with mild hypertension and diabetes presented with a

history of repeated right upper quadrant abdominal pain. She had undergone cholecystectomy 30 years earlier for gallstone with biliary colic. In addition, she had a laparoscopic Roux-en-Y gastric bypass performed 13 years earlier, with successful weight loss and no postoperative complications. Magnetic resonance cholangiopancreatography revealed an 8-mm calculus in the common bile duct (CBD) (► **Fig. 1**).

An elective laparoscopic transgastric ERCP using the single-use/disposable duodenoscope (Exalt Model D; Boston Scientific Corporation, Marlborough, Massachusetts, USA) was planned. The operation was performed with the patient under general anesthesia. Laparoscopically, a 15-mm trocar was placed under the left costal arch and into the bypassed stomach and fixed with sutures (► **Fig. 2**). Seamlessly, the procedure continued in the sterile setting with unpacking of the sterile duodenoscope

► **Fig. 2** A 15-mm trocar was placed under the left costal arch to enter the stomach.

► **Fig. 3** Unpacking the sterile duodenoscope.

► **Fig. 4** The EXALT duodenoscope is inserted through the port and advanced to the duodenum.

► **Video 1** Transgastric endoscopic retrograde cholangiopancreatography performed using the single-use EXALT duodenoscope. The endoscope is introduced through the port, followed by cannulation, sphincterotomy, and stone removal with a balloon catheter.

(► **Fig. 3**). The duodenoscope was introduced through the port (► **Fig. 4**) and advanced to the duodenum. The CBD was cannulated, and the cholangiogram

confirmed the presence in it of a bile stone. A sphincterotomy was performed, and the stone was extracted with a balloon catheter (► **Video 1**). After the

ERCP, the 15-mm port was removed and the gastrotomy sutured. Operative time was less than 1 h. The postoperative course was uneventful, and the patient was discharged after 24 h.

Our case demonstrates a successful transgastric ERCP procedure using the new single-use/disposable duodenoscope, thus introducing the possibility of performing this type of procedure in a completely sterile manner, reducing the risk of contamination and infection. This opens up new prospects in the use of single-use endoscopes, where the sterility of the scopes becomes a substantial asset.

Endoscopy_UCTN_Code_TTT_1AU_2AC

Competing interests

The authors declare that they have no conflict of interest.

The authors

Mustafa Bulut^{1,2}, **Flemming Hjørne¹**, **Svend Knuhtsen¹**, **Trine Stigaard¹**, **Lasse Bremholm Hansen^{1,2}**

- 1 Department of Surgery, Zealand University Hospital, Koege, Denmark
- 2 Department of Clinical Medicine, University of Copenhagen, Denmark

Corresponding author

Mustafa Bulut, MD
Zealand University Hospital, Lykkebaekvej 1,
4600 Koege, Denmark
mustafabulut@dadlnet.dk

References

- [1] Tonnesen CJ, Young J, Glomsaker T et al. Laparoscopy-assisted versus balloon enteroscopy-assisted ERCP after Roux-en-Y gastric bypass. *Endoscopy* 2020; 52: 654–661. doi:10.1055/a-1139-9313
- [2] Peters M, Papasavas PK, Caushaj PF et al. Laparoscopic transgastric endoscopic retrograde cholangiopancreatography for benign common bile duct stricture after Roux-en-Y gastric bypass. *Surg Endosc* 2002; 16: 1106. doi:10.1007/s00464-001-4180-3
- [3] Banerjee N, Parepally M, Byrne TK et al. Systematic review of transgastric ERCP in Roux-en-Y gastric bypass patients. *Surg Obes Relat*

Dis 2017; 13: 1236–1242. doi:10.1016/j.soard.2017.02.005

- [4] Muthusamy VR, Bruno MJ, Kozarek RA et al. Clinical evaluation of a single-use duodenoscope for endoscopic retrograde cholangiopancreatography. Clin Gastroenterol Hepatol 2020; 18: 2108–2117.e3. doi:10.1016/j.cgh.2019.10.052
- [5] Ross AS, Bruno MJ, Kozarek RA et al. Novel single-use duodenoscope compared with 3 models of reusable duodenoscopes for ERCP: a randomized bench-model comparison. Gastrointest Endosc 2020; 91: 396–403. doi:10.1016/j.gie.2019.08.032

Bibliography

Endoscopy 2022; 54: E268–E270

DOI 10.1055/a-1508-5664

ISSN 0013-726X

published online 18.6.2021

© 2021. Thieme. All rights reserved.

Georg Thieme Verlag KG, Rüdigerstraße 14,
70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at
<https://mc.manuscriptcentral.com/e-videos>