Endoscopic ultrasound-guided gallbladder drainage after distension with a high density solution (hyaluronic acid)

A 95-year-old woman presented to the emergency department with clinical deterioration and vomiting. An abdominal computed tomography scan showed acute cholecystitis. She was not a candidate for surgery, therefore a percutaneous cholecystostomy was performed. In order to internalize drainage, 3 days later, the decision was made to convert the percutaneous cholecystostomy to internal transmural gallbladder drainage using a lumen-apposing metal stent (LAMS) (Video 1). The gallbladder was initially difficult to visualize owing to the presence of a 3 × 2-cm perivesicular abscess (Fig. 1).

After the abscess had been completely emptied with a 19-gauge needle, a contracted gallbladder was identified. Saline and contrast were used to distend the gallbladder through the percutaneous catheter; however, the contrast quickly left the gallbladder through the cystic duct and the small perforation it contained. It was therefore not possible to distend the gallbladder enough to place a LAMS safely (Fig. 2a). A 2% hyaluronic acid solution was then infused through the percutaneous catheter (Fig. 2b), allowing the gallbladder to distend sufficiently to place a 10 × 10-mm electrocautery-enhanced LAMS (Hot Axios; Boston Scientific, Marlborough, Massachusetts, USA). Finally, a 7-Fr double-pigtail stent was placed through the LAMS. The next day, the percutaneous catheter was removed. The patient improved clinically and was discharged several days later.

Endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) is an effective and safe technique for the treatment of acute cholecystitis in high risk patients [1]. In patients with previous percutaneous cholecystostomy, it is possible to convert the percutaneous drainage to internal transmural drainage using EUS guidance [2]. The percutaneous catheter allows the infusion of contrast to distend the gallbladder and achieve a suitable target. If, however, the cystic duct is patent, the contrast may quickly empty...
from the gallbladder, preventing ade-
quate distension. In this scenario, the in-
fusion of a viscous solution, in this case 
hyaluronic acid, can enable distension of 
the gallbladder by slowing the emptying 
through the cystic duct. EUS-guided 
injection of viscous solutions for gall-
bladder distension may be a helpful tech-
nique for EUS-guided gallbladder drain-
age in such challenging cases.

Endoscopy_UCTN_Code_TTT_1AS_2AG

Competing interests

Drs. Aparicio and Berzin are consultants for 
Boston Scientific. The remaining authors de-
clare that they have no conflict of interest.

The authors

Lucía Medina-Prado1, Carolina Mangas-
Sanjuan1, Belén Martinez-Moreno1, Juan 
Martínez-Sempere1, Tyler M. Berzin2, José 
Ramón Aparicio3

1 Endoscopy Unit, Department of 
Gastroenterology, Hospital General 
Universitario de Alicante, ISABIAL, Alicante, 
Spain
2 Division of Gastroenterology, Center for 
Advanced Endoscopy, Beth Israel Deaconess 
Medical Center, Harvard Medical School, 
Boston, Massachusetts, USA

Corresponding author

José Ramón Aparicio, MD
Unidad de Endoscopia Digestiva, Servicio de 
Medicina Digestiva, ISABIAL, Hospital 
General Universitario de Alicante, C/ Pintor 
Baeza 12, 03010 Alicante, Spain
japariciot@gmail.com

References

Outcomes of an international multicenter 
registry on EUS-guided gallbladder drainage 
in patients at high risk for cholecystectomy. 
Endosc Int Open 2019; 7: E964–E973

cal efficacy and safety of endoscopic ultra-
sound-guided gallbladder drainage replace-
ment of percutaneous drainage: A multi-
center retrospective study. Dig Endosc 
2019; 31: 180–187

Bibliography

Endoscopy 2020; 52: E400–E401
DOI 10.1055/a-1149-1153
ISSN 0013-726X
published online 17.4.2020
© 2020. 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 a free 
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.

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

Medina-Prado Lucía. EUS-GBD after hyaluronic acid distension ... Endoscopy 2020; 52: E400–E401 | © 2020. Thieme. All rights reserved.