EUS-guided drainage of the gallbladder using a novel 0.018-inch guidewire for preventing bile leakage (with video)

Mamoru Takenaka[1], Shunsuke Omoto[1], Masatoshi Kudo[1]
[1]Department of Gastroenterology and Hepatology, Kindai University Faculty of Medicine, Osaka-sayama, Japan

EUS-guided drainage of the gallbladder (EUS-GBD) is an established technique for gallbladder drainage.[1-3] Although the usefulness of a lumen-apposing metal stent has been widely reported,[4,5] it is not available in every institution; hence, techniques on how to safely perform EUS-GBD should be available.

Gallbladder puncture using a thin 22-gauge needle for EUS-FNA (22G FNA needle) is a good method to reduce complications such as bile leakage. However, this has not been feasible due to the lack of an appropriate 0.018-inch guidewire compatible with EUS-guided drainage with good X-ray fluoroscopy visibility and maneuverability.

A 68-year-old woman with obstructive jaundice due to pancreatic head cancer was referred to our hospital. Transpapillary biliary drainage with a covered metallic stent (MS) (X-Suit NIR; Olympus, Tokyo) was performed. After the procedure, jaundice improved, but acute cholecystitis occurred.

Video available on: www.eusjournal.com

Access this article online

Quick Response Code:

Website: www.eusjournal.com

DOI: 10.4103/EUS-D-21-00146

Percutaneous drainage was contraindicated due to ascites; hence, EUS-GBD was performed. A 22G FNA needle puncture was performed to minimize bile leakage. We used a new 0.018-inch guidewire (18 Fielder; Olympus, Tokyo) with a hydrophilic coating coil tip and a hard core, enabling both the ease of manipulation and the appropriate hardness required for device insertion [Figure 1].

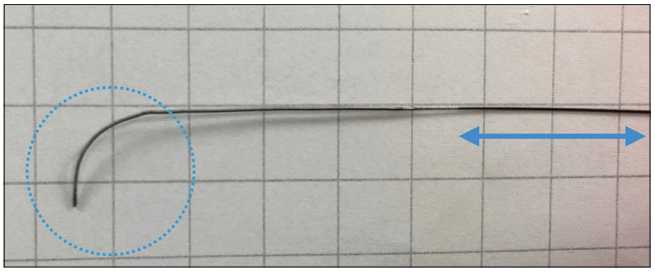

Figure 1. A new 0.018-inch guidewire with a hydrophilic coating coil tip (surrounded by a circle) and a hard core (arrow part) enabled both the ease of manipulation and the appropriate hardness required for device insertion (18 Fielder; Olympus, Tokyo)

How to cite this article: Takenaka M, Omoto S, Kudo M. EUS-guided drainage of the gallbladder using a novel 0.018-inch guidewire for preventing bile leakage (with video). Endosc Ultrasound 2022;11:520-1.

Address for correspondence
Dr. Mamoru Takenaka, Department of Gastroenterology and Hepatology, Kindai University Faculty of Medicine, 377-2 Ohno-higashi, Osaka-sayama, 589-8511, Japan.
E-mail: mamoxyo45@gmail.com
Received: 2021-06-14; **Accepted:** 2021-11-30; **Published online:** 2022-05-02

The guidewire was manipulated to the proper location in the gallbladder lumen with good fluoroscopy visibility. After expanding the puncture site to 3 mm with a balloon catheter, the inner sheath of the MS (Niti-S; Taewoong, South Korea) was inserted into the gallbladder with good pushability even though the guide wire was 0.018 inch. Finally, EUS-GBD was successful without any complications [Figure 2 and Video 1].

This is the first case of EUS-GBD performed with a 22G needle and a novel 0.018-inch guidewire. It is expected that advances in devices like this will continue to be utilized to make EUS-guided drainage safer.

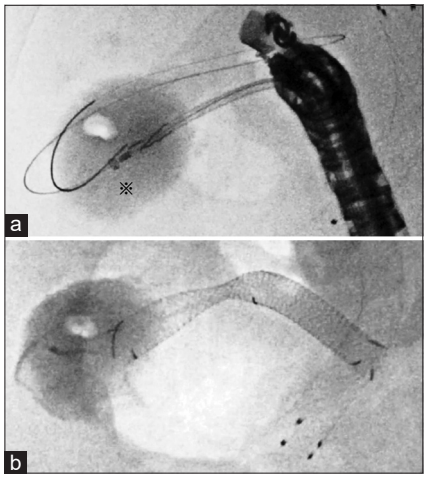

Figure 2. (a) The guidewire was manipulated to the proper location in the gallbladder lumen with good fluoroscopy visibility. Then, the inner sheath of metallic stent (※) was inserted into the gallbladder with good pushability even though the guide wire was 0.018 inch. (b) EUS-guided drainage of the gallbladder was successful without any complications

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Chan JH, Teoh AY. Current status of endoscopic gallbladder drainage. *Clin Endosc* 2018;51:150-5.
2. Issa D, Irani S, Law R, *et al*. Endoscopic ultrasound-guided gallbladder drainage as a rescue therapy for unresectable malignant biliary obstruction: A multicenter experience. *Endoscopy* 2021;53:827-31.
3. Ogura T, Higuchi K. Endoscopic ultrasound-guided gallbladder drainage: Current status and future prospects. *Dig Endosc* 2019;31 Suppl 1:55-64.
4. Teoh AY, Kongkam P, Bapaye A, *et al*. Use of a novel lumen apposing metallic stent for drainage of the bile duct and gallbladder: Long term outcomes of a prospective international trial. *Dig Endosc* 2021;33:1139-45.
5. Torres Yuste R, Garcia-Alonso FJ, Sanchez-Ocana R, *et al*. Safety and efficacy of endoscopic ultrasound-guided gallbladder drainage combined with endoscopic retrograde cholangiopancreatography in the same session. *Dig Endosc* 2020;32:608-15.