








Endoscopic ultrasound-guided right hepaticoduodenostomy for a patient with Chilaiditi syndrome

Ryoichiro Kobashi¹ , Rei Suzuki¹ , Tadayuki Takagi¹ , Mitsuru Sugimoto¹ , Naoki Konno¹ , Takuto Hikichi² , Hiromasa Ohira¹ 

¹Department of Gastroenterology, Fukushima Medical University School of Medicine, Fukushima, Japan

²Department of Endoscopy, Fukushima Medical University Hospital, Fukushima, Japan

Cite this article as: Kobashi R, Suzuki R, Takagi T, Sugimoto M, Konno N, Ohira H. Endoscopic ultrasound-guided right hepaticoduodenostomy for a patient with Chilaiditi syndrome. *Turk J Gastroenterol* 2018; 29: 239-40.

Dear Editor,

Endoscopic ultrasound-guided biliary drainage (EUS-BD) can be a salvage option after failed endoscopic retrograde cholangiography (ERC) or percutaneous biliary drainage. However, reports on EUS-BD for an isolated right intra-hepatic biliary duct are limited (1,2).

A 63-year-old female was referred to our hospital due to jaundice. Computed tomography (CT) scan showed interposition of the colon or small bowel in the hepatodiaphragmatic space, known as Chilaiditi syndrome,

and a mass lesion with an undefined margin surrounding the perihilar region (Figure 1a). Anterior segment of the right hepatic lobe was atrophic, and the intra-hepatic bile duct was bilaterally dilated. The patient was diagnosed with hilar cholangiocarcinoma with tumor seeding using endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA). For biliary drainage, we performed ERC and successfully deployed a 10-mm uncovered metallic stent in the left hepatic lobe: however, it was technically difficult to deploy a stent in the occulted right hepatic lobe due to steep bifurcation of the hepatic duct (Figure 1b). Few weeks later, she



Figure 1. a, b. Hilar cholangiocarcinoma with Chilaiditi syndrome; computed tomography scan showed interposition of the colon or small bowel in the hepatodiaphragmatic space and a mass lesion with an undefined margin surrounding the perihilar region (arrow head) (a); an uncovered metallic stent deployed in the left hepatic lobe (b)

ORCID IDs of the authors: R.K. 0000-0003-0991; R.S. 0000-0002-4049-0484; T.T. 0000-0003-0696-5973; M.S. 0000-0001-6626-9289; N.K. 0000-0001-9830-4317; T.H. 0000-0002-9815-1557; H.O. 0000-0003-4331-0634.

Address for Correspondence: **Rei Suzuki** E-mail: subaru@fmu.ac.jp

Received: **October 20, 2017** Accepted: **November 24, 2017**

© Copyright 2018 by The Turkish Society of Gastroenterology · Available online at www.turkjgastroenterol.org

DOI: [10.5152/tjg.2018.17681](https://doi.org/10.5152/tjg.2018.17681)

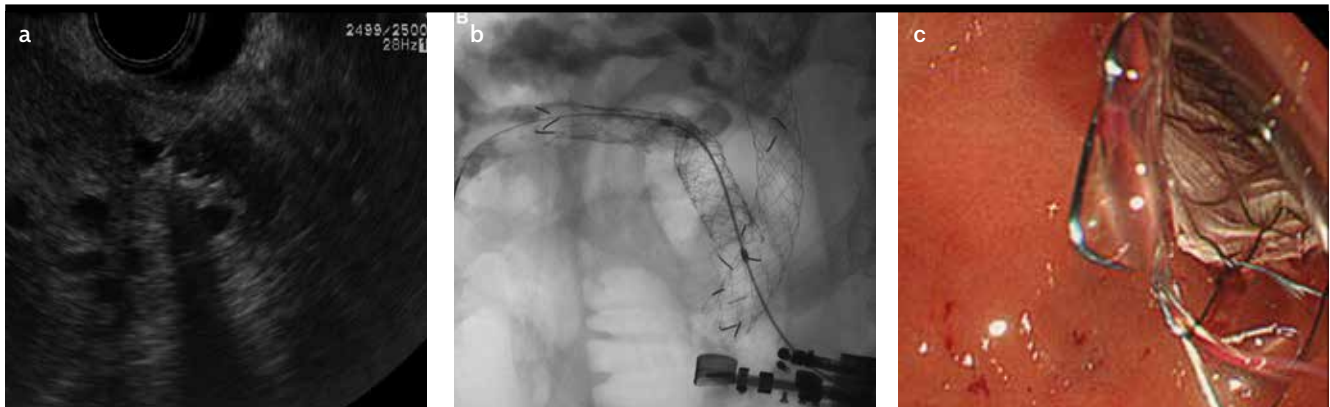


Figure 2. a-c. Endoscopic ultrasound-guided right hepaticoduodenostomy: Right posterior biliary duct was punctured with a 19-gauge EUS-FNA needle (a); a 10-mm partially uncovered stent was deployed (b, c)

revisited the hospital complaining of persistent fever. CT scan revealed liver abscess in the undrained posterior segment of the right hepatic lobe. Due to interposition of the colon, percutaneous biliary drainage was not indicated because abdominal ultrasound could not clearly visualize the intrahepatic biliary duct in the right hepatic lobe. Considering her anatomical features, we performed EUS- hepaticoduodenostomy (EUS-HDS) for the undrained posterior segment of the right hepatic lobe from the duodenal bulb. Written informed consent was obtained before the procedure.

After visualization of the bile duct by echo-endoscopy, we punctured it with a 19-gauge EUS-FNA needle (Sono Tip Pro Control 19G; Medi-Globe GmbH, Rosenheim, Germany; Medico's Hirata Inc., Osaka, Japan). A 0.025-inch guidewire (VisiGlide 2; Olympus Medical Systems, Tokyo, Japan) was introduced into the bile duct, and the needle tract was dilated via electrocautery (6-Fr Cysto-Gastro Sets, Endo-Flex GmbH, Dusseldorf, Germany). Thereafter, we placed a 10-mm partially covered metallic stent (Wallflex; Boston Scientific, Natick, Massachusetts, USA) (Figure 2a-c). After the successful biliary drainage, she did not require repeat biliary drainage.

As a general rule, a stent, especially a large bore metallic stent, should be carefully deployed when it can occlude the branches of biliary ducts. If we cannot drain

the occluded biliary duct with conventional endoscopic or percutaneous drainage techniques, endoscopic ultrasound-guided hepaticoduodenostomy can be a choice of treatment.

Informed Consent: Written informed consent was obtained from patient who participated in this study.

Peer-review: Externally peer-reviewed.

Author contributions: Concept – R.K., R.S., T.T.; Design – R.K., R.S., T.T.; Supervision – R.S., T.T., T.H., H.O.; Resource – R.K., R.S., T.T., M.S., N.K., T.H., H.O.; Materials – R.K., R.S., T.T., M.S., N.K., T.H., H.O.; Data Collection and/or Processing – R.K., R.S., T.T., M.S., N.K., T.H., H.O.; Analysis and/or Interpretation – R.K., R.S., T.T., M.S., N.K., T.H., H.O.; Literature Search – R.K., R.S.; Writing – R.K., R.S.; Critical Reviews – R.K., R.S., T.T., M.S., N.K., T.H., H.O.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

1. Ogura T, Takagi W, Onda S, et al. Endoscopic ultrasound-guided drainage of a right liver abscess with a self-expandable metallic stent. *Endoscopy* 2015; 47 Suppl 1 UCTN: E397-8.
2. Park SJ, Choi JH, Park DH, et al. Expanding indication: EUS-guided hepaticoduodenostomy for isolated right intrahepatic duct obstruction (with video). *Gastrointest endosc* 2013; 78: 374-80. [\[CrossRef\]](#)