# Successful biliary drainage with peroral direct cholangioscopy in a patient with Roux-en-Y hepaticoje-junostomy for congenital biliary dilatation

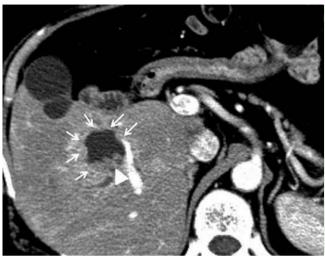


Fig. 1 Contrastenhanced computed tomography shows a limited cystic dilatation of the posterior bile duct (arrows) with multiple stones (arrowhead) and peripheral enhancement of the cystic dilatation.

The diagnostic and therapeutic effectiveness of combined double-balloon endoscopy with a short endoscope and peroral direct cholangioscopy with an ultraslim endoscope in patients who have altered gastrointestinal anatomy has been demonstrated [1–5]. We describe successful biliary drainage with a short double-balloon endoscope and peroral direct cholangioscopy in a patient who had cholangitis after surgery for congenital biliary dilatation.

A 61-year-old woman with a surgical history of hepaticojejunostomy and Rouxen-Y reconstruction for congenital biliary dilatation (Todani type IV-A) was admitted because of high fever associated with leukocytosis (white cell count 14100/µL [normal 3500 - 8500]) and elevated C-reactive protein (21.1 mg/dL [normal 0.0-0.3]). Contrast-enhanced computed tomography showed a limited cystic dilatation of the posterior bile duct with multiple stones and peripheral enhancement of the cystic dilatation (> Fig. 1). Magnetic resonance cholangiopancreatography (MRCP) showed dilatation of both intrahepatic bile ducts that was congenital biliary dilatation (> Fig. 2).

Because cholangitis of the posterior bile duct was suspected, the patient underwent double-balloon endoscopy for endoscopic retrograde cholangiography with a short enteroscope (EI-530B; Fujifilm, Tokyo, Japan). The hepaticojejunostomy anastomosis was widely patent ( Fig. 3). We sought the posterior branch with the guidewire but were unsuccessful because the intrahepatic bile ducts were widely dilated. Therefore, we exchanged the double-balloon endoscope for an ultraslim endoscope (EG-L580NW, outer diameter 5.8 mm, working channel 2.4 mm; Fujifilm), leaving the overtube in place with balloon inflation.

The ultraslim endoscope was advanced to the hepaticojejunostomy anastomosis and directly inserted into the intrahepatic bile ducts. We identified a membranous stricture of the posterior branch (**© Fig.4**) and cannulated it successfully. Cholangiography revealed multiple stones in the dilated posterior bile duct (**© Fig.5**). We performed biliary drainage with a 6-Fr double-pigtail plastic stent (**© Fig.6**).

Bacterial culture of the bile juice revealed *Escherichia coli* overgrowth, and cytologic analysis showed no malignancy. A definitive diagnosis of cholangitis was obtained. Thereafter, the patient's general condition and the results of clinical analyses rapidly improved.

Endoscopy\_UCTN\_Code\_TTT\_1AS\_2AD

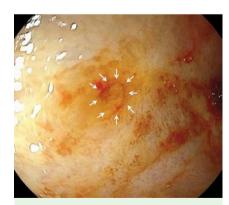
Competing interests: None



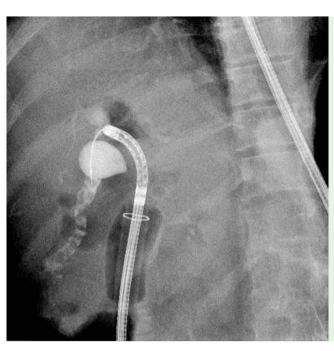
**Fig. 2** Magnetic resonance cholangiopancreatography shows dilatation of both the right and left intrahepatic bile ducts (arrows) that is congenital biliary dilatation (Todani type IV-A).



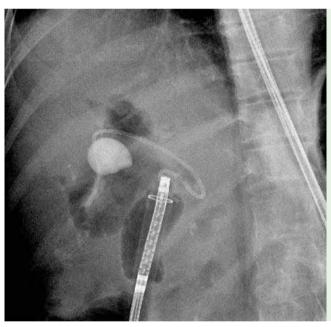
**Fig. 3** Endoscopic imaging of the hepaticojejunostomy anastomosis shows it to be widely patent.



**Fig. 4** Endoscopic imaging with an ultraslim endoscope shows a membranous stricture of the posterior branch (arrows).



**Fig. 5** Cholangiography with an ultraslim endoscope through the overtube reveals multiple stones in the dilated posterior bile duct.



**Fig. 6** Biliary drainage is performed with a 6-Fr double-pigtail plastic stent via an ultraslim endoscope.

# Kazuyuki Matsumoto<sup>1,2</sup>, Koichiro Tsutsumi<sup>2</sup>, Yuki Baba<sup>1</sup>, Koji Takemoto<sup>1</sup>, Hirofumi Tsugeno<sup>1</sup>, Shigeatsu Fujiki<sup>1</sup>, Hiroyuki Okada<sup>2</sup>

- <sup>1</sup> Department of Gastroenterology, Tsuyama Central Hospital, Tsuyama, Japan
- <sup>2</sup> Department of Gastroenterology and Hepatology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan

### References

- 1 Shimatani M, Matsushita M, Takaoka M et al. Effective "short" double-balloon enteroscope for diagnostic and therapeutic ERCP in patients with altered gastrointestinal anatomy: a large case series. Endoscopy 2009; 41: 849 – 854
- 2 Takaoka M, Shimatani M, Ikeura T et al. Diagnostic and therapeutic procedure with a short double-balloon enteroscope and cholangioscopy in a patient with acute cholangitis due to hepatolithiasis. Gastrointest Endosc 2009; 70: 1277 1279
- 3 *Itoi T, Sofuni A, Itokawa F* et al. Diagnostic and therapeutic peroral direct cholangioscopy in patients with altered GI anatomy (with video). Gastrointest Endosc 2012; 75: 441 469
- 4 Koshitani T, Matsuda S, Takai K et al. Direct cholangioscopy combined with double-balloon enteroscope-assisted endoscopic retrograde cholangiopancreatography. World J Gastroenterol 2012; 18: 3765 – 3769
- 5 Matsumoto K, Tsutsumi K, Kato H et al. Effectiveness of peroral direct cholangioscopy using an ultraslim endoscope for the treatment of hepatolithiasis in patients with hepaticojejunostomy (with video). Surg Endosc Jun 27. [Epub ahead of print]

### Bibliography

**DOI** http://dx.doi.org/ 10.1055/s-0034-1393138 Endoscopy 2015; 47: E497–E498 © Georg Thieme Verlag KG Stuttgart · New York ISSN 0013-726X

### **Corresponding author**

## Kazuyuki Matsumoto, MD

Department of Gastroenterology and Hepatology Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences 2-5-1 Shikata-cho Okayama 700-8558

Japan

Fax: +81-86-225-5991

matsumotokazuyuki0227@yahoo.co.jp