Digital single-operator cholangioscopy (DSOC) has increasingly been used in combination with electrohydraulic lithotripsy (EHL) to remove impacted stones, confluence stones, and stones in patients with surgically altered anatomy [1–4]. We present a case of hepatolithiasis in a stenotic intrahepatic bile duct after Roux-en-Y hepaticojejunostomy treated by EHL using DSOC (SpyGlass DS system; Boston Scientific Corp., United States) inserted through a colonoscope with a large working channel.

A 56-year-old woman with a history of Roux-en-Y hepaticojejunostomy for congenital biliary dilation and pancreaticobiliary maljunction was referred for treatment of hepatolithiasis. She underwent endoscopic retrograde cholangiography (ERCP) at the referring institution due to elevated hepatobiliary enzymes and hepatolithiasis noted on magnetic resonance cholangiopancreatography (▶Fig. 1). There, the endoscopist could not remove the stones but managed to insert a plastic biliary stent.

The patient was admitted to our hospital and ERCP was performed using a colonoscope with a 3.7-mm working channel (CF-HQ290ZI; Olympus Corp., Japan) (▶Video 1). Fluoroscopy confirmed multiple stones in the right intrahepatic bile duct (▶Fig. 2). The stones could not be removed using a retrieval basket or balloon. We therefore inserted a cholangioscope through the channel of the colonoscope, which revealed intrahepatic biliary stenosis in addition to multiple stones (▶Fig. 3). We dilated the biliary stenosis using a balloon dilator before reinserting the cholangioscope to perform EHL using Autolith (▶Fig. 4). In two sessions all stones were removed (▶Fig. 5). Brushing cytology of the biliary stenosis was negative for malignancy.

Successful EHL using DSOC through a nonstenotic bile duct has been reported [5]. While percutaneous cholangioscopy and endosonography-guided lithotripsy are alternatives for dif-

▶Fig. 1 Magnetic resonance cholangiopancreatography revealed stones in the right hepatic bile duct (red arrowhead).

▶Video 1 Electrohydraulic lithotripsy for hepatolithiasis in a stenotic intrahepatic bile duct after Roux-en-Y hepaticojejunostomy.

▶Fig. 2 Intrahepatic biliary stenosis (yellow arrowhead) and multiple filling defects suggestive of hepatolithiasis (blue arrowheads) were observed on fluoroscopy.

▶Fig. 3 Endoscopic view of the cholangioscope being inserted into the anastomosis of the right intrahepatic bile duct.
difficult stones in surgically altered anatomy, in those procedures the bile duct must be dilated and a new fistula created. Our method can be used in a stenotic and/or nondilated intrahepatic bile duct without creating a new fistula.

Endoscopy_UCTN_Code_TTT_1AR_2AK

Competing interests

The authors declare that they have no conflict of interest.

The authors

Kenji Nakamura1, Takeshi Okamoto2, Tadashi Katayama1, Yutaka Takigawa2, Katsuyuki Fukuda2, Hiroshi Kishikawa1, Jiro Nishida1
1 Department of Gastroenterology, Tokyo Dental College, Ichikawa General Hospital, 5-11-13, Sugano, Ichikawa, 272-8513 Chiba, Japan
2 Department of Gastroenterology, St. Luke’s International Hospital, Tokyo, Japan
3 Department of Surgery, Tokyo Dental College, Ichikawa General Hospital, Chiba, Japan

References


Bibliography

Endoscopy 2022; S4: E61–E62
DOI 10.1055/a-1381-6152
ISSN 0013-726X
published online 5.3.2021
© 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

Corresponding author

Kenji Nakamura, MD, PhD
Department of Gastroenterology, Tokyo Dental College, Ichikawa General Hospital, 5-11-13, Sugano, Ichikawa, 272-8513 Chiba, Japan
kenakamura@tdc.ac.jp

▶ Fig. 4 SpyGlass DS cholangioscopy showing the hepatolithiasis and intrahepatic biliary stenosis after dilation.

▶ Fig. 5 Fluoroscopy confirmed the absence of residual stones in the right anterior duct.