A case of severe hepatolithiasis after hepaticojejunostomy with Roux-en-Y reconstruction treated by endoscopic ultrasound-guided transhepatic antegrade stone removal

Balloon enteroscopy-assisted endoscopic retrograde cholangiopancreatography (ERCP) is useful for the treatment of bile duct stones in patients with surgically altered anatomy [1–3]; however, the procedure cannot always successfully remove stones when the anastomotic site or papilla of Vater cannot be reached. Recently, endoscopic ultrasound (EUS)-guided antegrade intervention has been developed for benign biliary diseases, including hepatolithiasis in patients with altered anatomy [4,5]. We report a case of EUS-guided transhepatic antegrade stone removal (EUS-TASR) in a patient with altered anatomy (Video 1).

The 59-year-old man underwent hepaticojejunostomy with Roux-en-Y reconstruction for hepatolithiasis several years previously. He was referred to our hospital for treatment of severe hepatolithiasis. Abdominal computed tomography showed huge impacted stones in the hilum and a dilated left intrahepatic bile duct (Fig. 1a).

We chose to perform EUS-TASR because accessing the anastomotic site by balloon-assisted ERCP was judged to be difficult owing to the long afferent loop and because multiple sessions would be required for stone removal. We first performed EUS-guided hepaticogastrostomy (EUS-HGS). The dilated left intrahepatic bile duct was punctured using a 19-gauge fine-needle aspiration needle from the residual stomach side. Cholangiography showed multiple impacted stones from the hilum to the bilateral intrahepatic bile ducts. A 0.025-inch guidewire was inserted into the intrahepatic bile duct and the needle tract was dilated using an ultra-tapered mecani-
cal dilator. A fully covered metal stent was then placed over the guidewire (▶ Fig. 2). EUS-TASR was performed 1 month later. After dilation of the anastomotic stricture using a balloon catheter, a cholangioscope was inserted into the intrahepatic bile duct through the metal stent. Bile duct stones were crushed using electrohydraulic lithotripsy under direct visualization (▶ Fig. 3). Subsequently, stone fragments were removed using a basket catheter and balloon catheter through the anastomotic route and HGS route (▶ Fig. 4). Finally, the huge hepatic bile duct stone was completely removed (▶ Fig. 1b).

Corresponding author

Kenjiro Yamamoto, MD
Department of Gastroenterology and Hepatology, Tokyo Medical University, 6-7-1, Nishishinjuku, Shinjuku-ku, Tokyo 160-0023, Japan
Fax: +81-3-53816654
ken.yamamoto5544@gmail.com

Competing interests

The authors declare that they have no conflict of interest.

The authors

Toshihiro Homma1, Kenjiro Yamamoto1, Takayoshi Tsuchiya1, Ryosuke Tonozuka1, Hirohito Minami1, Eri Joyama2, Takao Itoi1
1 Department of Gastroenterology and Hepatology, Tokyo Medical University Hospital, Tokyo, Japan
2 Department of International medicine, Tokyo Medical University Hospital, Tokyo, Japan

References


CORRECTION

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In the above-mentioned article, the institution of Takao Itoi has been corrected. This was corrected in the online version on September 30, 2020.