Magnetic compression anastomosis (MCA) is a revolutionary method of performing choledochocholedochostomy without surgery in patients with biliary obstruction [1–5]. Herein, we report the successful treatment, using MCA, of a case of complete biliary obstruction after partial hepatectomy.

A 64-year-old man who had undergone right partial hepatectomy for a metastatic liver tumor from rectal cancer was admitted to another hospital with bile leakage. Although the bile leakage was treated by endoscopic nasobiliary drainage, there was prolonged liver dysfunction, and computed tomography showed dilatation of the right-posterior intrahepatic bile duct (Fig. 1). Endoscopic retrograde cholangiopancreatography and percutaneous transhepatic biliary drainage (PTBD) were attempted but recanalization was not possible (Fig. 2). Therefore, the patient was referred to our hospital.

Initially, an 18-Fr PTBD catheter was placed. A cylindrical neodymium magnet, 5 mm in diameter, was pushed to the tip of the PTBD catheter and inserted in the intrahepatic bile duct using biopsy forceps (Video 1). Next, another magnet, 3 mm in diameter, was inserted up to the tip of the inner part of the outer sheath of the guidewire (VisiGlide 2; Olympus, Tokyo, Japan) for delivery (Fig. 3). Then, the outer sheath with the magnet was inserted via the papilla and the magnet was pushed out using biopsy forceps. The magnets were advanced to sites immediately before and after the obstruction. Then, the two magnets were positioned so that they attracted each other (Fig. 4, Video 1). A plas-
tic stent was placed via the transpapillary route in the left bile duct to prevent magnet migration. Recanalization was achieved 7 days after the procedure and the magnets were endoscopically removed using basket forceps, without adverse events (Fig. 5, Video 1). The created fistula was dilated using a 10-Fr biliary dilation catheter over the guide-wire. Finally, a fully covered self-expandable metal stent (BonaStent M-intraductal; Standard Sci Tech, Seoul, South Korea) was placed in the right bile duct across the fistula (Video 1).

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Competing interests

None

The authors

Xue-Mei Jiang1, Kenjiro Yamamoto2, Takayoshi Tsuchiya2, Atsushi Sofuni2, Shuntaro Mukai2, Yuichi Nagakawa3, Takao Itoi2
1 Department of Gastroenterology, Central South University Xiangya School of Medicine Affiliated Haikou Hospital, Haikou, China
2 Department of Gastroenterology and Hepatology, Tokyo Medical University, Tokyo, Japan
3 Third Department of Surgery, Tokyo Medical University, Tokyo, Japan

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

References


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