A 68-year-old man who had undergone complicated cholecystectomy 18 years ago presented with right upper quadrant abdominal pain and a high-grade fever. His complete blood count, liver function tests, and pancreatic enzyme levels were within normal limits. The broad-spectrum antibiotic combination of piperacillin and tazobactam was administered intravenously for 5 days until pain and fever subsided. A magnetic resonance cholangiopancreatogram (▶ Fig.1) revealed multiple stones in the cystic duct remnant (containing part of gallbladder neck and cystic duct; red arrow shows stones in the neck of remnant gallbladder and yellow arrow shows stones in the cystic duct).

Endoscopic ultrasound-guided drainage of the cystic duct remnant was attempted. An echoendoscope together with a 19 G needle was introduced into the closest area between the remnant and upper GI tract; in this case, the gastric antrum was chosen (▶ Fig.2). After confirmation by contrast injection, a guidewire was curled in the remnant (▶ Fig.3) and then a 6-Fr cystotome was used to create the tract. A 6-mm dilation balloon was used to expand the tract diameter. Then a 60 × 10-mm fully covered self-expandable metallic stent was inserted to maintain the fistula for 2 months (▶ Video 1).

Subsequently, another session of endoscopic treatment was done, the metallic stent was removed, and a naso-gastro scope was inserted into the fistula. A 1.5-cm stone was seen in the cystic duct remnant, and because there was no accessory to pass to the small channel of this scope, laser lithotripsy was performed to fragment the stone (▶ Fig.4). Finally, a 7-Fr × 15-cm double pigtail stent was inserted from the ampulla traversing the cystic duct and positioned in the cystic duct remnant (▶ Fig.5). A small forceps was used to adjust the other end of the stent to maintain the fistula tract, and this end was left in the stomach. The patient reported no further biliary tract infection during the 2-year follow-up.

Endoscopy_UCTN_Code_TTT_1AS_2AD
Competing interests

The authors declare that they have no conflict of interest.

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Fig. 4 Laser lithotripsy of a remnant stone via the accessory channel of a naso-gastroscope.

Fig. 5 A 7-Fr × 15-cm double pigtail plastic stent was inserted from the ampulla traversing the cystic duct with the proximal end placed in the cystic duct remnant (this end was eventually pulled to the antrum to maintain the fistula tract).

Bibliography

Endoscopy
DOI 10.1055/a-1704-7697
ISSN 0013-726X
published online 2021
© 2021, Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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