

Transgastric endoscopic ultrasound (EUS)-guided gallbladder drainage for acute cholecystitis



Fig. 1 Gallbladder punctured under endoscopic ultrasound guidance before placement of the guide wire.

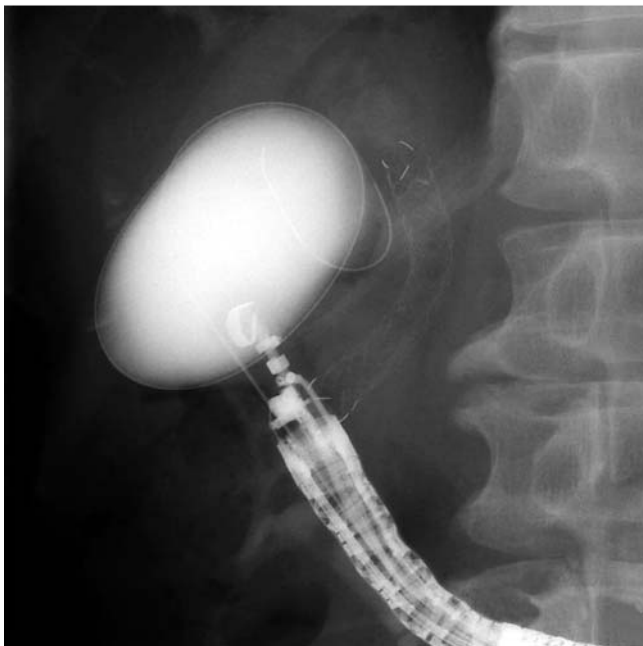


Fig. 2 Fluoroscopic image showing the coiled guide wire in the gallbladder.



Fig. 3 Fluoroscopic image showing the placement of the stent through the gastro-gallbladder fistula. The tip of the stent was positioned in the gallbladder.

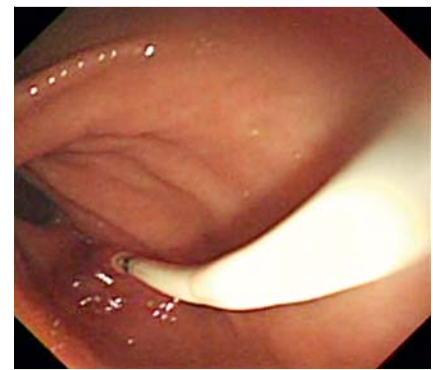


Fig. 4 Endoscopic view of the stent inserted into the gallbladder from the antrum of the stomach.

Acute cholecystitis occurs in 4%–7% of patients with a covered metallic stent (CMS) placed in the bile duct [1,2]. Percutaneous transhepatic gallbladder drainage, which involves an external drainage tube, decreases the ability of the patient to carry out their normal daily activities. Recently, endoscopic ultrasound (EUS)-guided drainage has been employed successfully for hepatogastrostomy, bilioduodenostomy, and pancreatogastrostomy [3–5]. We report here a patient who underwent EUS-guided gallbladder drainage for acute cholecystitis caused by CMS placement.

A 71-year-old man with unresectable pancreatic cancer underwent deployment of a CMS for obstructive jaundice. On the eighth post-procedure day, he complained of abdominal pain and developed fever, associated with an increase in white blood cell counts and raised serum level of C-reactive protein. Computed tomography revealed an enlarged gallbladder, suggesting acute cholecystitis and requiring continuous drainage of the gallbladder. Therefore, after obtaining informed consent, we carried out EUS-guided gallbladder drainage. An echoendoscope (GF-UCT240-AL5; Olympus, Tokyo, Japan) was introduced into the stomach, and a 19-gauge needle (Echo-Tip; Wilson-Cook, Winston-Salem, North Carolina, USA) was used to puncture the gallbladder (● Fig. 1) and create a gastro-gallbladder fistula. The infected bile was immediately aspirated via the needle and the gallbladder was irrigated with a contrast medium containing an antibiotic. A 0.035-inch guide wire (Revo-wave, Olympus, Tokyo, Japan) was passed through the needle under fluoroscopic guidance until it reached the gallbladder; the guide wire was coiled within the gallbladder (● Fig. 2). Three biliary dilation catheters (6 Fr, 7 Fr, and 9 Fr; Soehendra

Biliary Dilation Catheters, Wilson-Cook, Winston-Salem, North Carolina, USA) were serially advanced over the guide wire to dilate the diameter of the tract. A pigtail stent (diameter 7 Fr; length 4 cm) was placed over the guide wire to bridge the gallbladder and the antrum of the stomach (● Fig. 3, 4). There were no procedure-related complications. The patient's fever and abdominal pain resolved rapidly and laboratory data showed improvement 5 days later. Although the stent was kept in place for 6 months without any additional intervention, such as removal or exchange of the stent, there were no recurrent symptoms.

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K. Kamata, M. Kitano, T. Komaki, H. Sakamoto, M. Kudo

Division of Gastroenterology and Hepatology, Department of Internal Medicine, Kinki University School of Medicine, Osaka-sayama, Japan

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Corresponding author

M. Kitano, MD, PhD

Division of Gastroenterology and Hepatology

Kinki University School of Medicine

Ohno-higashi 377-2

Osaka-sayama 589-8511

Japan

Fax: +81-72-3660221

m-kitano@med.kindai.ac.jp