Endoscopic ultrasonography-guided liver abscess drainage using a dedicated, wide, fully covered self-expandable metallic stent with flared-ends

Fig. 1 An abscess in the left lobe of the liver identified at computed tomography (CT) in an 84-year-old man with a 12-day history of high fever and epigastric pain.

Fig. 3 Radiograph showing placement of the guidewire into the cavity of the liver abscess. Inset: endoscopic ultrasonography (EUS) image showing the liver abscess as a heterogeneous hypoechoic lesion in the gastrohepatic space.

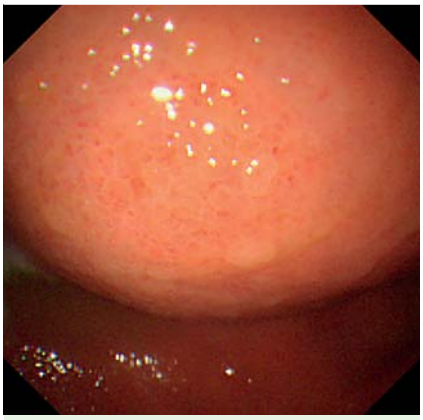

Fig. 2 Esophagogastroduodenoscopy (EGD) shows a bulging mass in the upper body of the stomach

Endoscopic ultrasonography (EUS)-guided drainage of liver abscesses has recently become available. We present here a case of successful drainage of a liver abscess using a dedicated wide fully covered self-expandable metallic stent (FCSEMS) with flared ends.

An 84-year-old man was admitted to another hospital with a history of high fever and epigastric pain for 12 days. Computed tomography (CT) revealed a 10.3×6.1-cm abscess in the left lobe of the liver (**Fig. 1**). He was referred to our hospital because of failure of a 1-week antibiotic regimen. Esophagogastroduodenoscopy revealed a bulging mass in the stomach (**Fig. 2**).

We attempted EUS-guided drainage through a transgastric approach. Using a 19-gauge needle, we punctured the abscess and placed a 0.025-inch guidewire (**Fig. 3**). A 6-Fr wire-guided diathermic dilator (Cysto-Gastro-Set; Endo-Flex, Voerde, Germany) was used to dilate the needle tract using a blended cut mode. Finally, a dedicated wide FCSEMS with flared ends (NAGI stent, 16×3 cm; Taewoong-Medical, Seoul, Korea) was placed, without any complications (**Fig. 4**, **Fig. 5**). After stone clearance from the common bile duct, the patient was discharged on postoperative day 10 without removal of the SEMS (**Fig. 6**).

Seven cases of EUS-guided drainage of liver abscess, including one case of multiple abscesses, have been reported to date [1,2]. The left lobe of the liver, the caudate lobe, and the gastrohepatic space usually lie in close proximity to the stomach or duodenum [1]. Therefore, EUS-guided liver abscess drainage might be safe and effective in the management of these areas. Single or double plastic stents were used in most of the reported cases [1]; the newly designed dedicated anchoring FCSEMS with a "yo-yo" shape was placed in only one patient [2]. It has been suggested that a dedicated FCSEMS is the ideal stent for treating liver abscesses and pancreatic fluid collection because of its antimigration feature and because it allows direct insertion of an endoscope through it [3].

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Competing interests: None

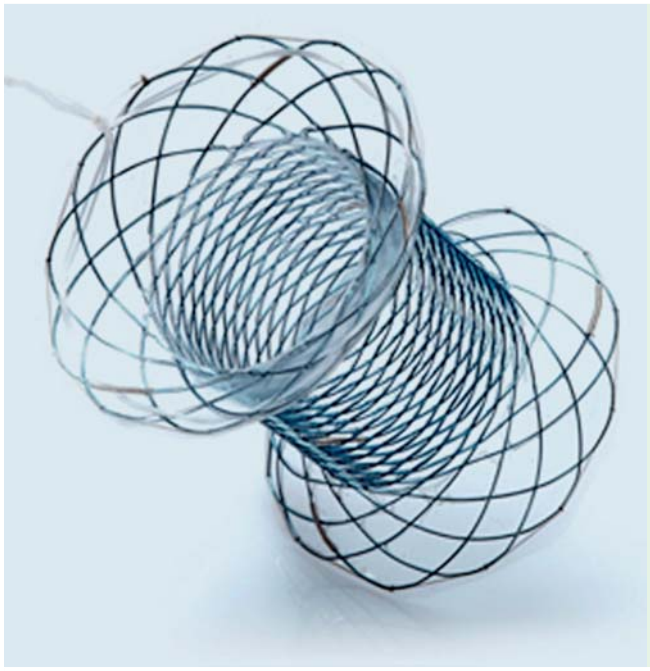

Fig. 4 The dedicated, wide, fully covered self-expandable metallic stent (FCSEMS) with flared ends (NAGI stent; Taewoong-Medical, Seoul, Korea)

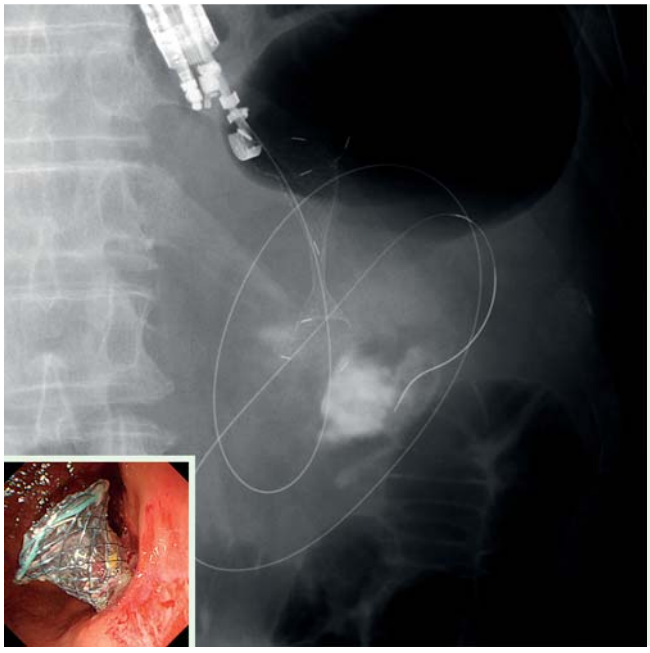

Fig. 5 Radiograph showing placement of the NAGI stent into the cavity of the liver abscess. Inset: endoscopic view of the purpose-designed stent.

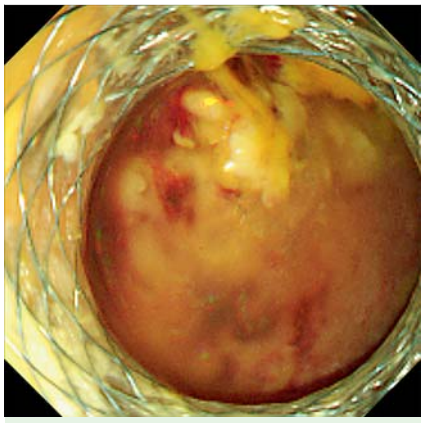

Fig. 6 Endoscopic view through the NAGI stent on postoperative day 8, showing only necrotic tissues on the surface of the liver.

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