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

Running head: EUS-guided liver abscess drainage

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Recently, endoscopic ultrasonography (EUS)-guided drainage of liver abscess has been developed. We present a case of successful liver abscess drainage using a dedicated wide flared end fully covered self-expandable metallic stent (FCSEMS).

An 84-year-old man admitted with high fever and epigastric pain for 12 days to another hospital. 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 1 week of intravenous antibiotics treatment did not succeed. Esophagastroduodenoscopy revealed bulging mass in the stomach (Fig. 2). We attempted EUS-guided drainage through the transgastric approach. Using a 19-gauge needle, we punctured the abscess and placed a 0.025-inch guidewire (Fig. 3). Then, a 6-Fr wire-guided diathermic dilator (Cysto-Gastro-Set; Endo-Flex, GmbH, Voeerde, Germany) was used to dilate the needle tract with blended cut mode. Finally, a dedicated wide flared end FCSEMS (NAGI™ stent, 16×3-cm, Taewoong-Medical Co., Ltd., Seoul, Korea) was placed without any complications (Fig. 4, 5). He discharged postoperative day 10 without SEMS removal (Fig. 6) after clearance of common bile duct stones.

Until now, seven cases of EUS-guided drainage of the liver abscess including multiple abscesses case were reported [1,2]. The left lobe of liver, the caudate lobe and gastrohepatic space usually lie in close proximity to the stomach or duodenum [1]. Therefore, EUS-guided drainage of liver abscess 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]. In only one patient, newly dedicated anchoring FCSEMS like “yo-yo” shape were placed [2]. At present, it is suggested that a dedicated FCSEMS is
an ideal stent and is highly recommended for treating liver abscess as well as pancreatic fluid collection in terms of anti-migration and the direct insertion of an endoscope through the FCSEMS [3].
FIGURE LEGENDS

**Fig. 1**: Radiograph showing the liver abscess in the left lobe of the liver.

**Fig. 2**: Endoscopic image showing bulging mass in the upper body of the stomach.

**Fig. 3**: Radiograph showing the guidewire placement into the cavity of the liver abscess (inset: endoscopic ultrasonographic image showing the liver abscess as heterogenous hypoechoic lesion in the gastrohepatic space).

**Fig. 4**: Photograph of a dedicated wide flared end fully covered self-expandable metallic stent (NAGI™ stent, Taewoong-Medical Co., Ltd., Seoul, Korea).

**Fig. 5**: Radiograph showing the NAGI™ stent placement into the cavity of the liver abscess (inset: endoscopic view of the NAGI™ stent).

**Fig. 6**: Endoscopic image through the NAGI™ stent on postoperative day 8 showing necrotic tissues alone in the surface of the liver.
REFERENCES


Fig. 6