



Title	Endoscopic ultrasonography-guided liver abscess drainage using a dedicated, wide, fully covered self-expandable metallic stent with flared-ends
Author(s)	Kwakami, Hiroshi; Kawakubo, Kazumichi; Kuwatani, Masaki; Kubota, Yoshimasa; Abe, Yoko; Kawahata, Shuhei; Kubo, Kimitoshi; Sakamoto, Naoya
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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

Hiroshi Kawakami <sup>1</sup>; Kazumichi Kawakubo <sup>1</sup>; Masaki Kuwatani <sup>1</sup>; Yoshimasa Kubota <sup>1</sup>;  
Yoko Abe <sup>1</sup>; Syuhei Kawahata <sup>1</sup>; Kimitoshi Kubo <sup>1</sup>; Naoya Sakamoto <sup>1</sup>

Department of Gastroenterology and Hepatology, Hokkaido University Graduate School  
of Medicine, Sapporo, Japan

Address correspondence to: Hiroshi Kawakami, MD, PhD

Department of Gastroenterology and Hepatology, Hokkaido University Graduate School  
of Medicine

Kita 15, Nishi 7, Kita-ku, Sapporo 060-8638, Japan

Fax: +81 11 706 7867

E-mail: [hiropon@med.hokudai.ac.jp](mailto:hiropon@med.hokudai.ac.jp) (H. Kawakami)

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 other 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. Esophagogastroduodenoscopy 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, Voerde, 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.

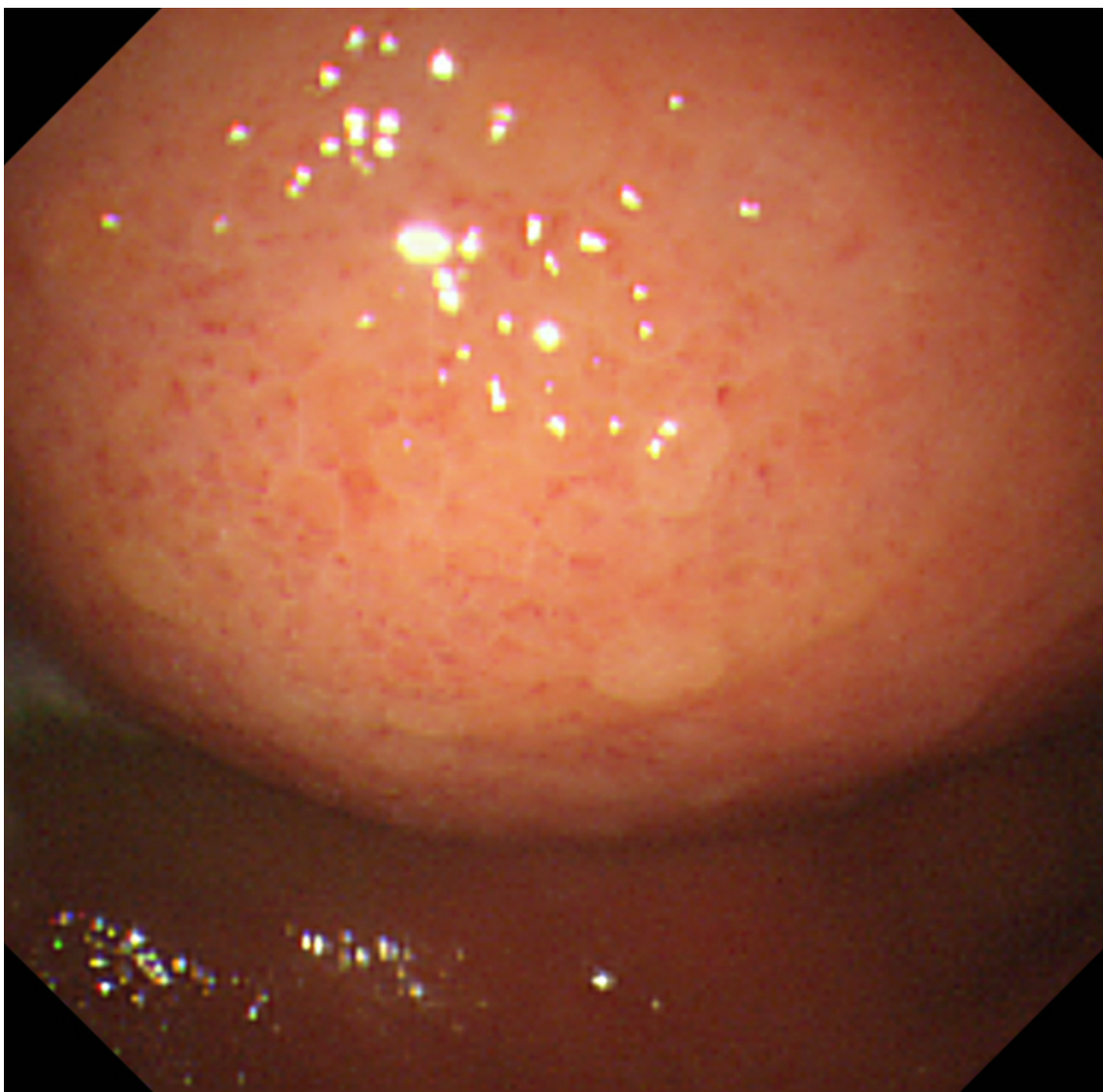
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**Fig. 1**

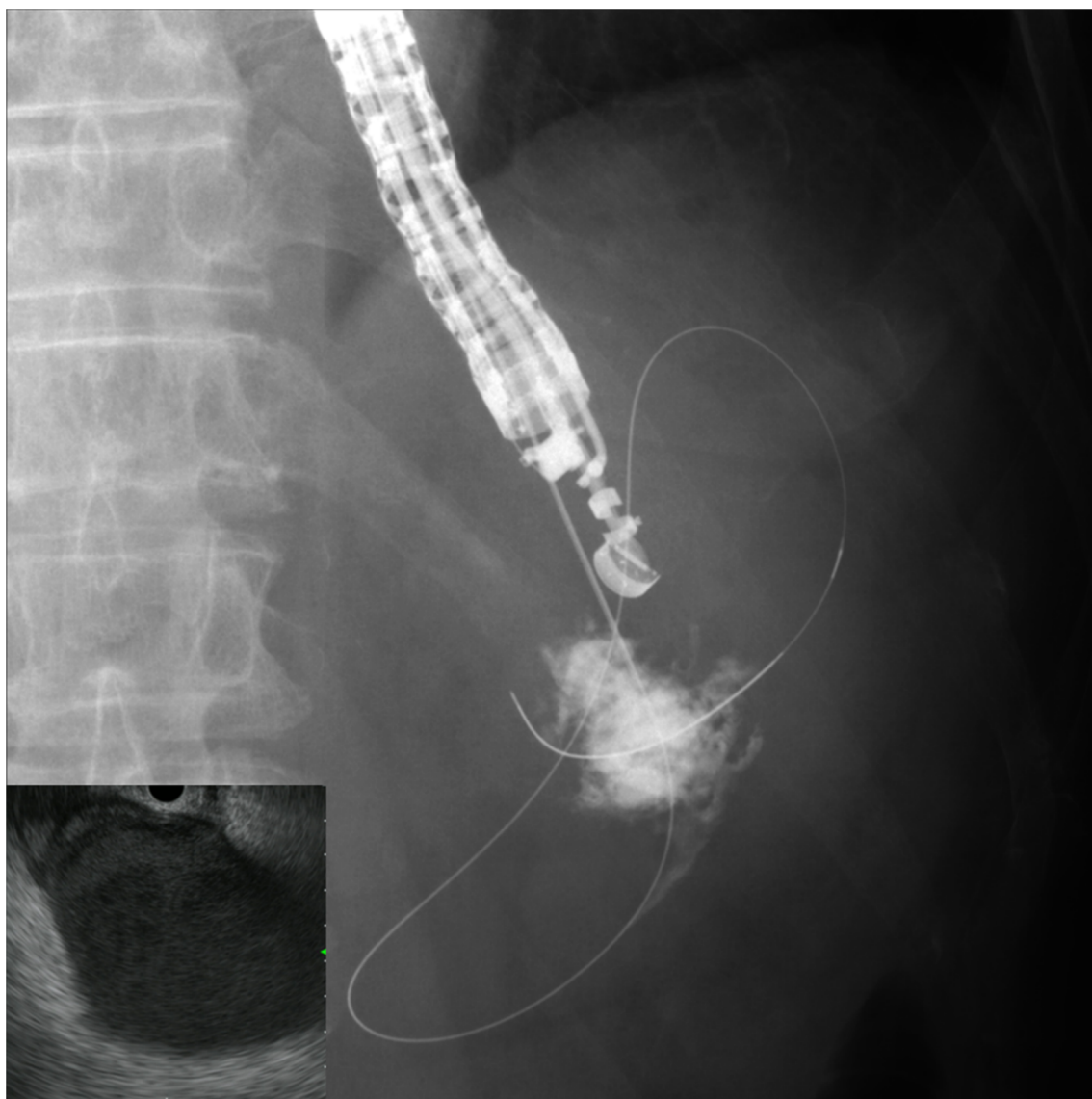


**Fig. 2**

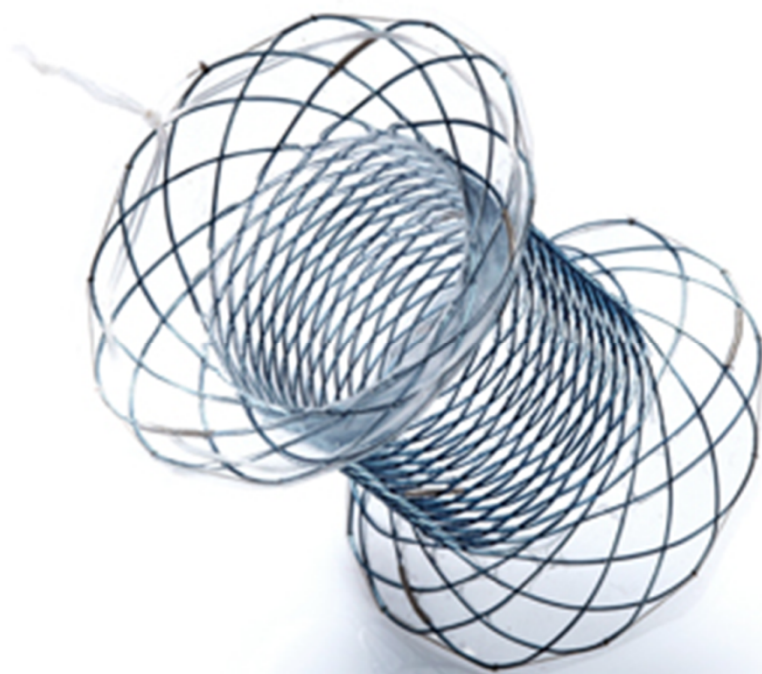




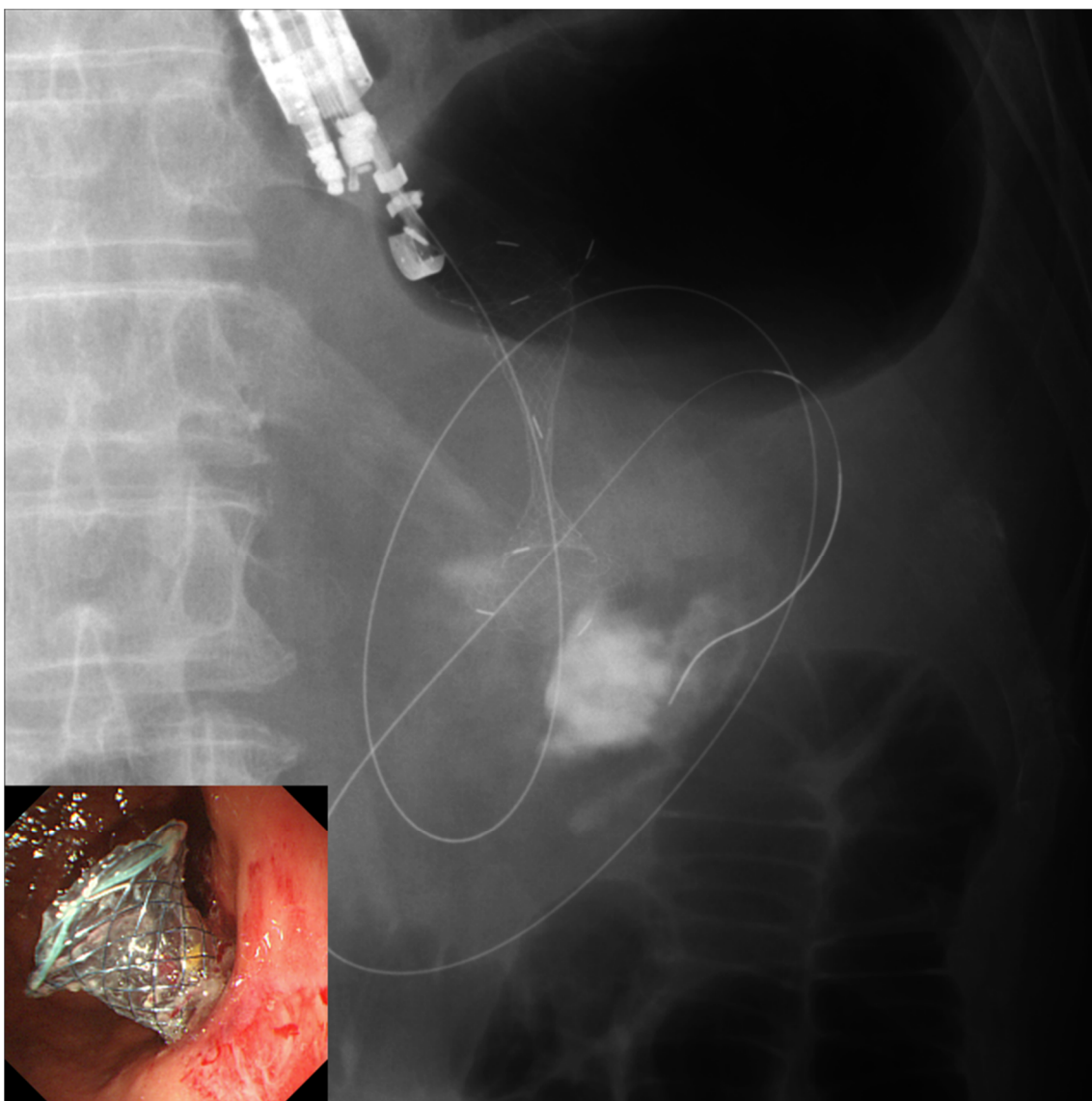
**Fig. 3**



**Fig. 4**



**Fig. 5**



**Fig. 6**

