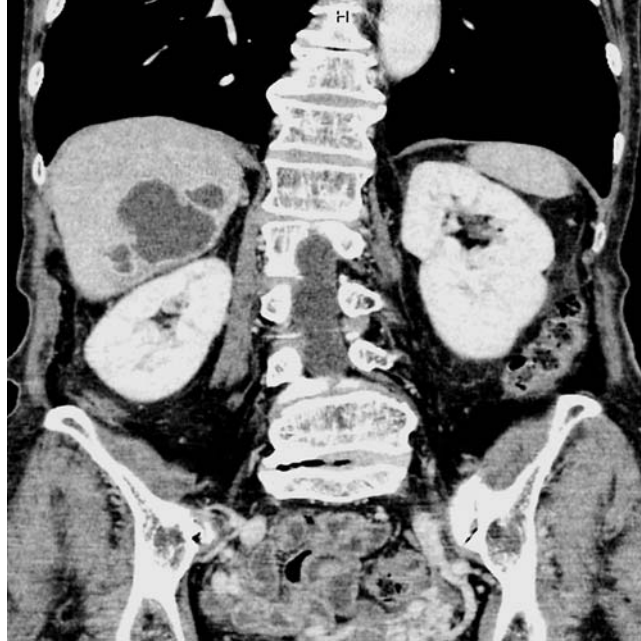


## Endoscopic ultrasound-guided drainage of a right liver abscess with a self-expandable metallic stent



**Fig. 1** Axial computed tomographic scan showing a liver abscess in the right hepatic lobe of an 81-year-old woman presenting with fever and abdominal pain.

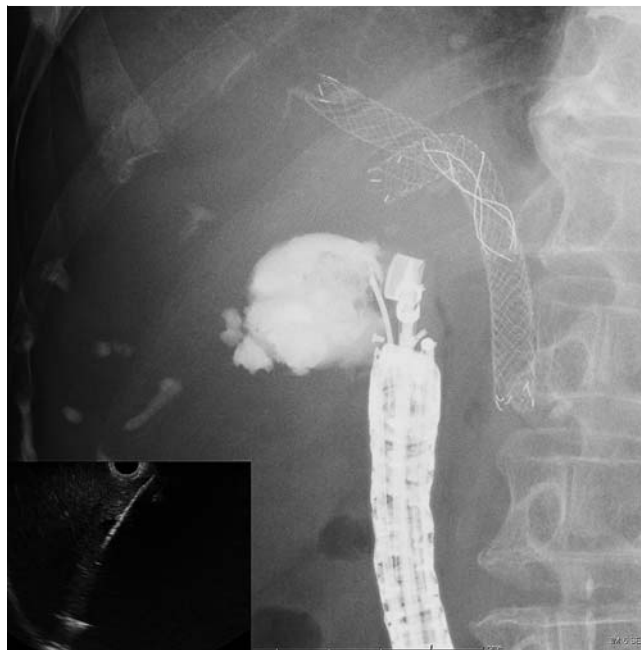


**Fig. 2** Coronal computed tomographic scan of the liver abscess.

Percutaneous drainage is one of the first options for the treatment of liver abscesses [1]. However, this method has several limitations, such as the requirement for external drainage and the risk for self-removal of the tube. On the other hand, endoscopic ultrasound (EUS)-guided drainage of liver abscesses overcomes both of these limitations. In addition, EUS-guided liver abscess drainage with a self-expandable metallic stent (SEMS) has a greater effect than percutaneous drainage, and leakage of the infected fluid is not likely to occur.

To date, only a few cases of EUS-guided liver abscess drainage with a SEMS have been reported [2]. Furthermore, EUS-guided drainage of an abscess in the right hepatic lobe has not previously been reported. Herein, we describe our technique for performing EUS-guided drainage of an abscess of the right hepatic lobe with a SEMS.

An 81-year old woman was admitted to our hospital with fever and abdominal pain. Computed tomography revealed a liver abscess with a maximum diameter of 64mm in the right hepatic lobe parenchyma (● Fig. 1, ● Fig. 2). The patient had previously undergone metallic stent placement in the right hepatic bile duct because of unresectable cholangiocarcinoma. In addition, she had dementia; therefore, to avoid the risk for self-removal of the tube, we selected a transluminal approach with EUS.



**Fig. 3** The liver abscess was punctured with a 19-gauge fine-needle aspiration needle, and contrast medium was injected. **Inset** Endoscopic ultrasound-guided image showing a huge liver abscess.

First, the echoendoscope was advanced into the duodenum, and with counter-clockwise rotation the right hepatic lobe was visualized. We punctured the liver abscess with a 19-gauge fine-needle aspiration needle (Medi-Globe GmbH, Rosenheim, Germany), and the infected fluid was aspirated. Next, contrast medium was injected (● Fig. 3), and a 0.025-inch guide-

wire (VisiGlide; Olympus Medical Systems, Tokyo, Japan) was inserted. After the fistula had been dilated with a 4-mm Hurricane Balloon Dilatation Catheter (Boston Scientific, Tokyo, Japan), the stent delivery system was inserted. Finally, we successfully placed a fully covered SEMS (Bonastent, 10 mm × 10 cm; Standard Sci-Tech, Seoul, Korea) from the liver abscess



**Fig. 4** A fully covered self-expandable metallic stent was successfully placed from the liver abscess to the duodenum.

**Inset** A massive amount of infected material seen on the endoscopic image.

to the duodenum (● **Fig. 4**, ● **Video 1**). The treatment resulted in a decrease in the size of the liver abscess, and the patient was discharged without any adverse events. EUS-guided liver abscess drainage has the potential to become the first-line method for draining liver abscesses because it can be used even for abscesses of the right hepatic lobe, as in the present case.

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**Competing interests:** None

**Video 1**

The liver abscess was punctured with a 19-gauge fine-needle aspiration needle, and contrast medium was injected. Then, a guide-wire was inserted into the liver abscess. First, an endoscopic retrograde cholangiopancreatography (ERCP) catheter was inserted to dilate the fistula. Next, balloon dilation was performed. Finally, a stent was successfully placed from the liver abscess to the duodenum.

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