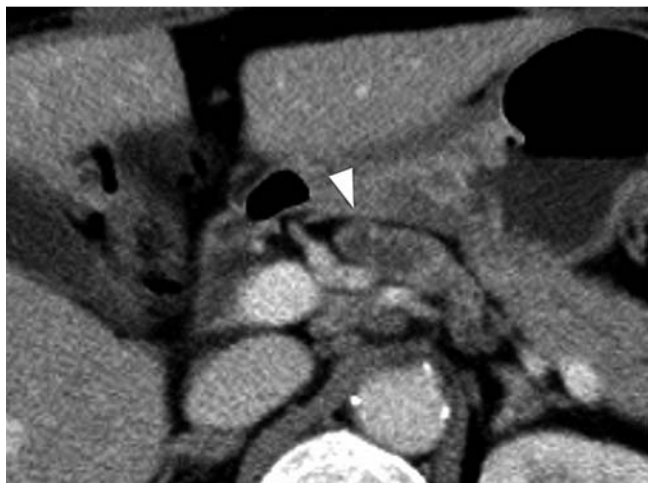
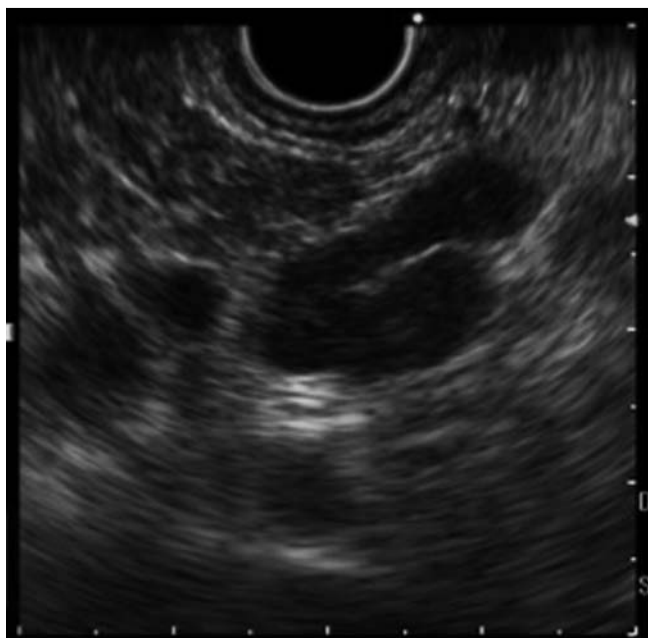


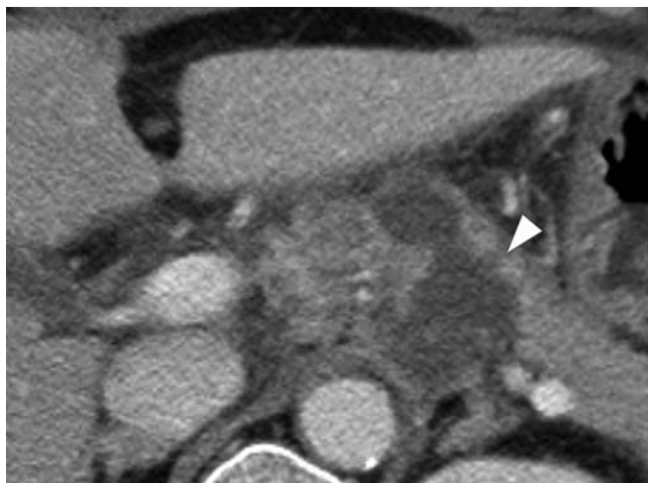
## Tuberculous abscess formation with liver invasion after endoscopic ultrasound-guided fine-needle aspiration for abdominal lymphadenopathy



**Fig. 1** Computed tomography showing lymphadenopathy (arrowhead), 25 mm in diameter, around the common hepatic artery in a 62-year-old woman with low-grade fever.



**Fig. 2** Endoscopic ultrasonography (EUS) revealed hypoechoic lesions measuring about 20 mm.

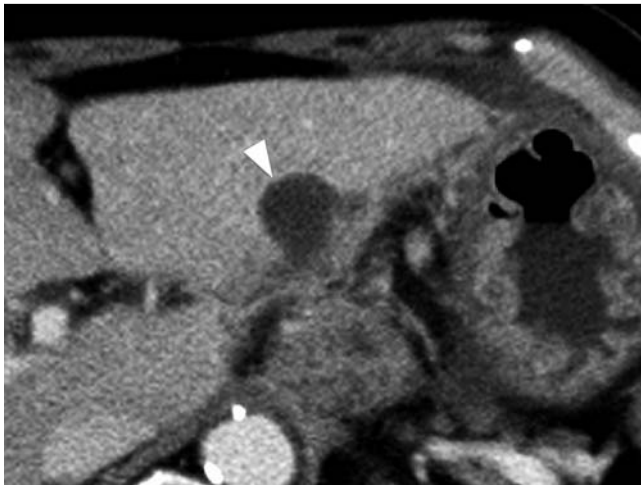


**Fig. 3** One month after EUS-guided fine-needle aspiration, CT revealed a lobular abscess (arrowhead), 45 mm in diameter, around the biopsied lymph nodes.

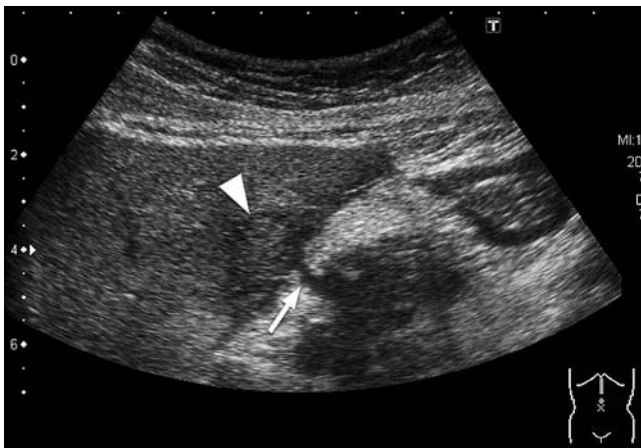
A 62-year-old woman was referred to our hospital because of low-grade fever, with a suspected diagnosis of extrapulmonary tuberculosis. Computed tomography (CT) revealed lymphadenopathy, 25 mm in diameter, around the common hepatic artery (● Fig. 1). Endoscopic ultrasonography (EUS) revealed hypoechoic lesions measuring about 20 mm (● Fig. 2). Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) was performed and indicated no sign of malignancy. Polymerase chain reaction and culture of the biopsied specimens were negative for *Mycobacterium tuberculosis*.

A month after EUS-FNA, the patient complained of epigastralgia, and the laboratory data suggested marked inflammation. CT revealed a lobular abscess, 45 mm in diameter, around the biopsied lymph nodes (● Fig. 3). A week of antibiotic therapy did not improve the patient's condition. CT at the end of this time showed a new abscess in the lateral segment of the liver (● Fig. 4). Abdominal ultrasonography showed a connection in the sagittal plane between the lesion in the liver and the hypoechoic area outside the liver (● Fig. 5), suggesting that the abscess had progressed in a superior and ventral direction, penetrating the hepatic capsule and defying gravitational pull. Percutaneous transhepatic drainage of the abscess was performed. Polymerase chain reaction and culture of the pus were positive for tuberculosis. The progression of the abscess into the liver enabled percutaneous drainage, thus allowing the diagnosis to be made. Antituberculous therapy prevented recurrence during a 1-year follow-up.

Abdominal tuberculosis, which is a common form of extrapulmonary tuberculosis [1], often manifests as lymphadenopathy [2]. EUS-FNA sampling is an established modality for evaluating abdominal tuberculous lymphadenopathy. The overall accuracy of EUS-FNA has been reported to be around 90% [3]. In one study, no major postprocedure complications were seen after EUS-FNA [4]. In the case presented here, however, EUS-FNA triggered the growth of tuberculous lymphadenopathy into an abscess. Moreover, the abscess progressed against gravity, although tuberculous abscesses, such as gravitation abscesses, are well known to move with gravity. To avoid incorrect treatment, endosonographers should be aware of this rare complication of EUS-FNA.



**Fig. 4** One week after the initiation of antibiotic therapy to treat the lobular abscess shown in **Fig. 3**, CT showed a new abscess (arrowhead) in the lateral segment of the liver.



**Fig. 5** Abdominal ultrasonography showed a connection in the sagittal plane (arrow) between the lesion in the liver (arrowhead) and the hypoechoic area outside the liver.

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**Competing interests:** None

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## Bibliography

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