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【 EDITORIAL 】

Enormous Potential of Endoscopic Ultrasound-guided Liver Biopsies

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We read with great interest the original article by Takano et al. (1), wherein they described the importance of liver biopsies using endoscopic ultrasound (EUS).

A liver tumor biopsy (LTB) is an essential tool for diagnosing, evaluating, and treating various diseases. Several approaches are available to conduct an LTB. Conventionally, an LTB was performed percutaneously under ultrasound (US) guidance. At present, however, EUS-guided LTBs have become available (2-5).

An EUS-guided LTB provides higher-quality images of both hepatic lobes, detects smaller hepatic lesions, and allows a more detailed view of the biopsy needle in real time US guided LTB. These characteristics allow for a safer biopsy. In addition, the "fanning" technique (6) can be conducted to obtain a better biopsy sample (2).

As Takano et al. (1) stated, the caudal area (S1), which is distal when approached percutaneously, can be accessed proximally when approached internally, which is more effective. An EUS-guided LTB can be used as a rescue method when a US-guided LTB is difficult to perform. Lee et al. (3) also reported that an EUS-guided LTB could obtain adequate tissue samples and serve as an effective rescue method for performing an LTB in patients in whom a US-guided LTB failed to obtain an adequate tissue sample. Therefore, EUS- and US-guided LTBs can be considered complementary procedures.

However, it can be difficult to diagnose pancreatic cancer and bile duct cancer, even with an EUS-guided LTB that targets primary lesions. In such cases, the target can be changed to the liver as a rescue method during the same session.

In this paper, Takano et al. (1) compared EUS-guided LTBs and percutaneous biopsies. They found that the incidence of adverse events was significantly lower in the EUS-guided LTB group than in the percutaneous biopsy group, whereas no significant difference was observed in the diagnostic yield between the groups.

In a meta-analysis of studies (n=437) reporting on EUS-guided LTBs, the rate of adverse events was 2.3%, with minor bleeding as the primary complication (4). EUS-LTB also has a number of drawbacks, including its relatively recent development. In addition to requiring higher level of technical skill than other techniques, physicians must learn how to perform an EUS-guided LTB (7). It is also slightly difficult to perform puncture of the right hepatic lobe using an EUS-guided LTB. This is because maneuverability is lost as the device is maneuvered from the duodenal bulb, and the EUS beam does not reach lesions proximal to the subdiaphragm areas, resulting in blind spots, which make it difficult to perform puncture.

In the present paper by Takano et al. (1), an EUS-guided LTB was performed. However, to improve the diagnostic yield of EUS-guided LTBs, further research is needed. In particular, precision medicine using cancer genomic diagnostics is being adopted increasingly frequently in the medical community. In contrast to the differential diagnosis of malignancy, a panel for genome profiling requires a substantial amount of tissue.

Going forward, the effectiveness of EUS-LTBs can be further advocated if the method is proven to be equivalent or superior to a US-guided LTB.

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