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EC GASTROENTEROLOGY AND DIGESTIVE SYSTEM

Case Report

EUS Guided Liver Mass Biopsy; Simple and Safety Option

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Abstract

A 53-year-old male patient was admitted to the hospital complaining of abdominal pain and fatigue. Physical examination revealed palpation and tenderness in the right upper quadrant. According to the laboratory tests, liver enzyme levels were elevated and an ultrasound revealed heterogeneously hyperechoic lesions in the right lobe (9 x 7.7 cm) and one hypoechoic lesion (2.5 cm) within the left lobe of the liver. Liver biopsy was recommended and the patient underwent endoscopic ultrasonography-guided liver biopsy (EUS-LB) with a 22-gauge needle. The pathology of the patient was reported as small cell neuroendocrine carcinoma metastasis.

Keywords: *Endoscopic Ultrasonography-Guided Liver Biopsy (EUS-LB); 22-Gauge Needle*

Introduction

Liver biopsy is important for diagnosing, evaluating and managing liver diseases. Biopsies are done through various approaches including percutaneous, transjugular or a surgery. Endoscopic ultrasonography (EUS) has been used to diagnose and for therapy. EUS-guided liver biopsy (EUS-LB) has become popular due to its unique advantages over other methods.

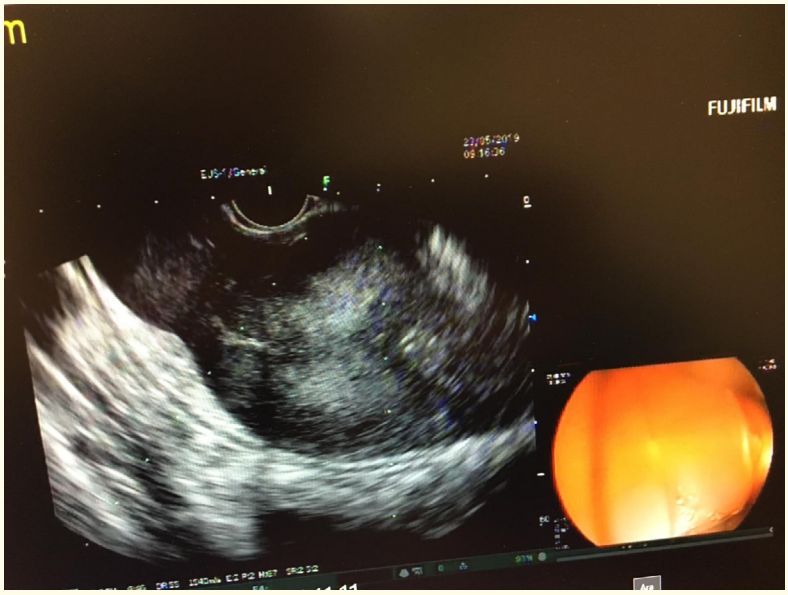
Case Presentation

A 53-year-old male patient was admitted to the hospital complaining of abdominal pain and fatigue. The patient was evaluated by physical examination and laboratory and imaging methods. Physical examination revealed palpation and tenderness in the right upper quadrant. According to the laboratory tests, liver enzyme levels were elevated. Laboratory tests for all hepatitis strains were not remarkable.

Ultrasound showed that the liver had heterogeneously hyperechoic lesions in the right lobe (9 x 7.7 cm) and one hypoechoic lesion (2.5 cm) within the left lobe. The ultrasound report determined multiple lesions of the liver and metastasis. An upper gastrointestinal endoscopy was issued based on the US report; however, the test was normal. The patient refused colonoscopy, but agreed to proceed with a liver biopsy. The biopsy was performed with a needle of 22 gauge, from a hypoechoic mass whose boundaries were evident in the liver segment 4 - 8 location (Figure). The pathology of the patient was reported as small cell neuroendocrine carcinoma metastasis.

Discussion and Conclusion

Over the past few years, EUS has become a useful alternative for liver biopsies. EUS-LB confers several advantages over other methods, including the ability to target both right and left lobes of the liver, increased patient comfort, and decreased apprehension during the procedure as well as shorter recovery time after the biopsy. In our case, the patient was discharged within an hour.



Traditionally, a 16-guage transcutaneous LB needle has been used, whereas the EUS biopsy needle is generally 19-gauge. The reduction in needle size has been suggested to decrease the complication rate (through bleeding and pain reduction). A previous report [1] showed that, of the six different needle sizes studied, the 19-gauge needle was better at the overall diagnostic yield in comparison to all other needles. In our study, we used an even smaller needle (22-gauge), which was successful for the EUS-LB procedure [2-6].

The use of histology to identify liver damage is essential for disease diagnosis. Pathology results from biopsy guides the management process Here, we show that EUS-LB with a 22-gauge needle is safe and can retrieve adequate tissue for histology. The EUS-LB method is recommended for patients that have been determined to have elevated liver enzymes due to liver complications or disease.

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