2024
16 PARIS HEPATOLOGY CONFERENCE

Hybrid PHC 2024
Institut Pasteur - Paris
March 18-19

International Conference on the Management of Liver Diseases
Organised by Patrick Marcellin & Laurent Castera – Association for the Promotion of Hepatologic Care (APHC)

HCC
#P20 - Shear-wave sono-elastography in the discrimination of hepatocellular carcinoma and dysplastic nodules in cirrhotic patients

R. RABABOC[1], S. IOANITESCU[1], L. TOMA[1], M. DODOT[1], L. ILIESCU[1]

(1) Fundeni Clinical Institute - Bucharest (Romania)

Background & Aims
Early and accessible detection of hepatocellular carcinoma (HCC) is critical in cirrhotic patients, as it increases access to curative therapeutic means. Abdominal ultrasonography (US) is the first imagistic line of screening, with CT and MRI reserved for diagnostic confirmation. However, it may be difficult to discriminate between small neoplastic lesions and regeneration nodules, often co-existing in cirrhotic livers. The aim of this study is to evaluate the use of shear-wave sono-elastography (SWE) in HCC diagnosis and in differentiation of HCC and dysplastic nodules.

Methods
113 cirrhotic patients were evaluated by abdominal US and SWE. In each patient 3 areas of interest were selected. We excluded patients in whom SWE could not be accurately performed. SWE was performed using a color map of tissue stiffness (with blue indicating low stiffness values and red indicating increased stiffness). Stiffness was measured three times for each lesion and the average value was noted. Patients underwent CT or MRI scan for diagnosis confirmation.

Results
Mean age in the study group was 57.32 +/- 24.81 years old, 60.2% male patients. Etiology of liver disease was: viral hepatitis: 62.8% viral hepatitis, 24.7% metabolic-associated steatohepatitis and 12.5% alcohol-related liver disease. Stratification by Child Pugh score revealed 16.8% Class A cirrhosis, 50.4% Class B cirrhosis and 32.8% Class C cirrhosis. We found that HCC nodules had increased stiffness compared to dysplastic nodules in all Child classes, independent of etiology (22.15 KPa versus 14.78 Kpa, p< 0.001). Color coding did not prove useful in differentiating HCC, as all lesions appeared with mixed color- blue with red foci.

Conclusions
Lesion stiffness may be helpful in distinguishing between malignant and benign liver lesions in cirrhotic patients, despite limitations regarding technical difficulties in obtaining accurate images. In selected cases, this additional step performed during ultrasonography may help prioritize patients for further abdominal imaging.