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You Want Me to Perform a Liver Stiffness Test in My Clinic, Did I Hear That Right?

Announcer:
Welcome to CME on ReachMD. This episode is part of our MinuteCE curriculum.

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Dr. Alkhouri:
This is CME on ReachMD, and I'm Dr. Naim Alkhouri, the Chief Medical Officer and the Director of the Steatotic Liver Program at Arizona Liver Health in Phoenix, Arizona. Now, I will discuss step 4 in the AGA management algorithm for patients with MASLD. And this step will include obtaining liver stiffness measurement.

Liver stiffness is a surrogate marker for liver fibrosis stage, and this can be done as point of care in the outpatient settings to quantify the stage of fibrosis. This is typically measured using what we call vibration-controlled transient elastography, or VCTE. And what we do, actually we induce a shear wave that propagates through the liver tissue. And with the VCTE machine, we can follow the velocity of the wave. And by following the velocity of the wave, we can determine liver stiffness, which is a surrogate for fibrosis stage.

When we measure liver stiffness we get a number that's measured in kilopascal units, or kPa. And liver stiffness can be categorized as low liver stiffness, when the liver stiffness is less than 8 kPa, and this indicates that the patient is not at risk for clinically significant fibrosis. So this would be a lower-risk patient that can be followed by primary care. Then we have indeterminate or intermediate risk. this is liver stiffness between 8 to 12 kilopascals. And these patients have high probability of having clinically significant fibrosis, defined as stage 2 to 4 fibrosis, so stage 2 or higher. And then we have patients in the high-risk category based on VCTE, and this is when the liver stiffness is more than 12 kilopascals. And these patients have high probability of having advanced fibrosis, defined as stage 3 or higher.

And we actually utilize the combination of the FIB-4 index and liver stiffness score to categorize patients into low, indeterminate, and high risk. So a patient with FIB-4 less than 1.3, or if the FIB-4 is between 1.3 to 2.67 plus the liver stiffness is less than 8 kilopascals, this is a patient that will be considered low risk, and this is a patient that should be managed in the primary care setting. If we have a patient with a indeterminate FIB-4 between 1.3 to 2.67 but now the liver stiffness is between 8 to 12 kilopascals, then this is considered intermediate risk. we need to also provide lifestyle intervention and manage cardiovascular risk factors. But in these patients in the intermediate risk category, we have greater need for weight loss interventions and the use of antiobesity medicines or even bariatric surgery in selected patients.

We can consider also pharmacologic treatment for MASH. Now we have an FDA approved medication. and when we manage type 2 diabetes, we should select patients that are more likely to have beneficial effect on MASH, such as pioglitazone and GLP-1 receptor agonist.

And finally, if we have a patient that's considered high risk, so either a FIB-4 more than 2.67, or if the liver stiffness is more than 12 kilopascals, these are patients that have high probability of having advanced fibrosis. So we have a strong need to implement a comprehensive lifestyle intervention, and we should strongly also consider using the most effective antiobesity medications we have.

And by that, I mean second generation GLP-1 agonist and dual agonist, GLP-1 and GIP, and also consider bariatric surgery or endobariatric procedures. And these are patients also where we should strongly consider pharmacologic treatment specific for MASH. And also prioritized pioglitazone and GLP-1 receptor agonists and dual agonists for the management of type 2 diabetes. So my takeaway message is that by using the combination of the FIB-4 score and the liver stiffness on vibration-controlled transient elastography, we can accurately risk stratify patients with MASLD into three risk categories and provide the optimal management. Thank you.

Announcer:
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