Liver Enzyme Tests Often Fail to Identify Cirrhosis

A majority of people with alcohol-related liver cirrhosis may have normal ALT levels.

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Standard liver enzyme tests that measure alanine aminotransferase (ALT) and aspartate transaminase (AST) can fail to detect alcohol-related liver cirrhosis, according to study results published in the American Journal of the Medical Sciences.

“The core message here is that if you just look at the test, you’ll miss the diagnosis,” Don Rockey, MD, of the Medical University of South Carolina, said in a press release.

Heavy alcohol consumption can lead to serious liver disease, including advanced fibrosis, cirrhosis, liver cancer and the need for a liver transplant. Although cirrhosis is generally not reversible, early diagnosis offers an opportunity to reduce drinking and receive treatment that can reduce symptoms and increase life expectancy.

Liver disease is often diagnosed with the help of liver enzyme tests. Elevated ALT and AST levels can indicate liver inflammation or injury. People with liver disease may also have elevated bilirubin levels, which can lead to jaundice.

Rockey and colleagues conducted a retrospective analysis to assess whether liver enzyme levels were normal or abnormal in people with alcohol-related cirrhosis. The study population included 78 people with the condition who were admitted to a medical center between January 2016 and December 2018. More than half were men, and the average age was 55 years.

Among this population, 70 people (90%) had normal ALT levels, 12 people (15%) had normal AST values and 20 people (26%) had normal bilirubin levels. All participants experienced decompensating events indicating liver failure, and one third died. The researchers found no association between liver complications or death and aminotransferase levels.

“Aminotransferase levels are often unremarkable in patients with alcohol-related cirrhosis and bear no relationship to clinical events or outcomes,” the researchers concluded. “Clinicians should be cautious when interpreting aminotransferases in patients with alcoholic cirrhosis.”

“We would see these patients with advanced disease and complications, yet their liver tests

seemed to be normal," Rockey said. "So if you just looked at their liver tests, you'd say, 'Oh no problem,' but in fact, that wasn't the case."

These findings suggest that noninvasive methods, such as CT scans, MRI scans and elastography (FibroScan), may be more effective for early detection of liver cirrhosis.

Click here to read the study abstract.

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