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# Physicians over-relying on a commonly used laboratory test can miss liver cirrhosis

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Dr. Don Rockey is the director of the Digestive Disease Research Core Center at the Medical University of South Carolina. Credit: Sarah Pack, Medical University of South Carolina

A recent study at the Medical University of South Carolina's (MUSC)

Digestive Disease Research Core Center (DDRCC) provides insight into why physicians should be cautious when using a certain liver function test to diagnose alcoholic cirrhosis.

Alcoholic cirrhosis affects around 1 in 400 adults in the U.S. It is an advanced form of liver disease, which occurs when chronic ethanol use leads to inflammation and cirrhosis or scarring of the liver. Less than 50% of people diagnosed with advanced liver disease due to cirrhosis survive for one year, and so early diagnosis is crucial. Although cirrhosis is generally not a reversible condition, early diagnosis provides physicians with an opportunity to encourage cessation of drinking and offer treatment that can reduce symptoms and increase life expectancy.

A common method to diagnose patients with alcoholic cirrhosis is to look for elevated levels of enzymes known as aminotransferases in the liver. However, the MUSC study, published in The American Journal of Medical Sciences, found that patients with alcoholic cirrhosis have nearly normal levels of aminotransferases. In this study, liver function test results of 78 patients with alcoholic cirrhosis revealed that 90% had normal test results for alanine aminotransferase and 15% for aspartate aminotransferase.

The study's findings are important because physicians who rely only on these tests can fail to diagnose alcoholic cirrhosis, said MUSC Health gastroenterologist and DDRCC director Don Rockey, M.D., who led the study.

In his own practice, Rockey has often observed that his patients with advanced liver disease have normal results on this test.

"We would see these patients with advanced disease and complications, yet their liver tests seemed to be normal. So, if you just looked at their liver tests, you'd say, 'Oh no problem,' but in fact, that wasn't the case,"

said Rockey.

Often, patients may show subtle signs and symptoms in the early stages of alcoholic cirrhosis. However, if physicians look only at the laboratory results and not the patient, they are going to be "faked out," said Rockey.

"Doctors need to be paying attention to the history, the physical examination, the whole clinical picture," he said.

Physicians should also be aware of tools that are available to diagnose cirrhosis, said Rockey. Noninvasive diagnostic tools include cross-sectional imaging, CT scans, MRI scans and especially the new technique—elastography. Rockey explained that elastography is a simple, noninvasive and convenient way to assess fibrosis and scarring in the liver. This test, available at MUSC and other tertiary care centers, can be performed easily in clinics or at the patient's bedside.

Rockey said that the next step is to educate as many providers as possible and spread the word. While physicians who specialize in gastroenterology may understand that these laboratory tests are not always reliable, it is important to get this information out to a wide variety of practitioners.

"The core message here is that if you just look at the test, you'll miss the diagnosis," he said.

**More information:** Mary Kate Sullivan et al, Normal or Near Normal Aminotransferase Levels in Patients with Alcoholic Cirrhosis, *The American Journal of the Medical Sciences* (2021). DOI: 10.1016/j.amjms.2021.09.012