

Noninvasive ways to assess liver disease

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Two new studies examine non-invasive ways to determine liver fibrosis and cirrhosis. An enhanced version of the Original European Liver Fibrosis panel was found to have good diagnostic accuracy for fibrosis in patients with non-alcoholic fatty liver disease. Conversely, transient elastography was unreliable for detecting cirrhosis in patients with acute liver damage. The studies are published in the February issue of *Hepatology*, a journal by John Wiley & Sons on behalf of the American Association for the Study of Liver Diseases (AASLD).

Liver biopsy is the undisputed best way to assess liver fibrosis or cirrhosis; however, it is an invasive procedure that can cause rare, but potentially life threatening complications. Researchers have been seeking less invasive ways to diagnose liver disease, developing and testing clinical tools, like the Original European Liver Fibrosis Panel and transient elastography.

Researchers led by William Rosenberg in the United Kingdom, sought to validate the Original European Liver Fibrosis panel and consider a simplification that removed age as a factor yielding the Enhanced Liver Panel. They also tested the diagnostic performance of the ELF panel with the addition of the following simple markers: age, BMI, presence of diabetes/impaired fasting glucose, AST/ALT ratio, platelets, and albumin.

They recruited 196 patients with non-alcoholic fatty liver disease from two separate centers and tested the diagnostic accuracy of the new panels. They found that the Enhanced Liver Fibrosis panel detected

severe fibrosis, moderate fibrosis and no fibrosis at AUCs of .90, .82, and .76 respectively. The diagnostic accuracy of the ELF panel plus simple markers was .98, .93 and .84 respectively. They report that using either panel could eliminate the need for liver biopsy in diagnosing severe fibrosis in more than 80 percent of cases.

“The ELF panel has good diagnostic accuracy in an independent validation cohort of patients with NAFLD,” the authors conclude. “The addition of established simple markers augments the diagnostic performance across different stages of fibrosis, which will potentially allow superior stratification of patients with NAFLD for emerging therapeutic strategies.”

Meanwhile, researchers in Germany led by Abdurrahman Sagir used transient elastography—Fibroscan (FS)—to measure liver stiffness in 20 patients presenting with acute hepatitis. In 15 (75 percent) of the patients, the test showed liver stiffness values that suggested cirrhosis. However, none of these patients showed any signs of cirrhosis in a physical exam, on ultrasound, or in liver histology.

“Liver stiffness measurement by FS in patients with acute liver damage overestimate the real stage of fibrosis and may erroneously suggest the presence of liver cirrhosis,” the authors report. The stiffness may relate to hepatocyte swelling, cholestasis, or infiltrates of inflammatory cells in the inflamed liver, they suggest.

“FS results need to be interpreted with caution in patients with acute liver damage and high values of liver stiffness do not predict the simultaneous presence of cirrhosis in these patients,” they conclude.

Both studies offer new information on the ability of non-invasive methods to diagnose liver disease, though further studies are needed to advance our understanding of these diagnostic tools.

Source: Wiley-Blackwell

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