Noninvasive Tests Reduce Need for Liver Biopsies in Hep C

June 10, 2011

The use of noninvasive alternatives to liver biopsies to assess liver disease in people with chronic hepatitis C is becoming increasingly more common and reliable in certain situations, according to an expert article published in the June issue of *Hepatology* reviewing two such diagnostic options: elastography and blood tests.

Liver biopsy remains the gold standard for determining activity and stage of fibrosis, or scarring of the liver. However, this procedure has inherent limitations, such as pain, bleeding, inaccurate staging from sampling error, and variability of biopsy interpretation.

With the increase in availability of sophisticated laboratory blood testing, however, the use of invasive liver biopsies is on the decline, explains Jayant Talwalkar, MD, of the Mayo Clinic in Rochester, Minnesota, and a coauthor of the article. “The drawbacks to liver biopsy have prompted researchers to investigate alternative, noninvasive markers for determining the severity of liver disease.”

Noninvasive screening with serum markers, or indicators in the blood, can identify patients at risk for liver fibrosis. Fibrotest, an indirect serum marker panel, is the most widely used and validated serum marker panel used worldwide, Talwalkar and his colleague Doris Nguyen, MD, write. The authors indicate that a number of studies have confirmed this panel to be reliable in detecting stage 4 fibrosis (cirrhosis) in patients with chronic hepatitis C.

Additional studies are underway to analyze its viability in hepatitis B, alcoholic fatty liver disease (AFLD) and non-alcoholic fatty liver disease (NAFLD).

Imaging techniques such as ultrasound-based transient elastography (TE) and magnetic resonance elastography (MRE) are noninvasive procedures that measure liver stiffness. According to Talwalkar and Nguyen, prior studies have found TE to be up to 90 percent accurate in diagnosing cirrhosis, and 70 to 80 percent accurate in detecting stage 2 to stage 4 fibrosis. Evaluations of MRE have shown up to 85 percent accuracy for detecting intermediate to severe fibrosis (F2–F4). Currently only MRE is approved for use in the United States.

“Noninvasive diagnostics are more advantageous to the patient as there are no serious side effects and they may be more cost effective when compared to liver biopsy, although this remains

to be determined," Talwalkar says.

Talwalkar stresses, however, that liver biopsies still have their place in diagnostic care. "Fibrotest or elastography imaging are helpful to confirm cirrhosis or minimal to no fibrosis. Liver biopsy may still be necessary to determine stage of fibrosis in those patients where noninvasive techniques were indeterminate."
