Liver Biopsy May Become More of A Prognostic Than Diagnostic Test

BY MIRIAM E. TUCKER
Senior Writer

PHILADELPHIA — Liver biopsy is losing its appeal as a diagnostic tool for chronic liver disease, Dr. K. Rajender Reddy said at the annual meeting of the American College of Physicians.

Problems associated with liver biopsy such as sampling error, inadequate specimens, and interobserver variability have become in- creasingly apparent in recent years, whereas noninvasive markers of fibrosis and inflammation are showing more promise as diagnostic tools.

Overall, liver biopsy is assuming a role more as a prognostic test than as a diagnostic test. At the very least, it should not be used “as a knee-jerk response to hepatic biochemical test abnormalities,” said Dr. Reddy, professor of medicine and surgery and director of hepatology at the University of Pennsylvania, Philadelphia.

Studies published in the past 3-8 years suggest that because liver biopsy samples less than 1/50,000 of the liver, cirrhosis may be missed in up to 20% of patients. Moreover, grades of inflammation and stage of fibrosis may be under-scored in short, narrow specimens. Obtaining an adequate specimen—ideally more than 2.5 cm long, more than 1.4 mm wide, and with at least or more portal triads—is often a challenge.

Panels of noninvasive markers of fibrosis and inflammation are not quite “ready for prime time,” but such tests may be validated in the near future. Indirect markers include the aspartate transaminase:alanine transaminase (AST:ALT) ratio, AST-platelet ratio index, the Fibro Test, and ActiTest. Direct markers such as hyaluronic acid and YKL-40 may prove useful as well. In addition, an ultrasono- graphic tool called FibroScan is being evaluated in Europe.

The relative pros and cons of doing a liver biopsy depend on the condition. With hepatitis C, biopsy may help determine the extent of fibrosis and inflammation, which are the best predictors of disease progression. On the other hand, noninvasive markers may also accurately stage and grade the disease.

In hepatitis C patients with genotype 1, which carries the lowest treatment response rate, biopsy may help identify patients most in need of treatment. But patients with the more responsive genotypes 2 and 3 may be more motivated for therapy anyway and may forego biopsy.

Biopsy can help determine the need for treatment in patients who have side effects or in those who were previously treated and therefore less likely to respond to retreatment. However, “we don’t really have effective treatment strategies,” he said.

With hepatitis B, the decision to treat is generally made with hepatitis B serologies, vi- ral DNA, and ALT, although biopsy might be considered in patients with fluctuating ALT levels. And, although biopsy might prompt screening for varices and hepatocellular carcinoma (HCC), it is generally recommended in these patients whether cirrhosis is present or not, he noted.

For patients with elevated ALT levels, a biopsy can help confirm a diagnosis. How- ever, a cause for abnormal hepatic biochemical tests is accurately identified clinically in more than 90% of cases without a biopsy. Similarly, the diagnosis of nonalcoholic fatty liver disease (NAFLD) is usually made clinically, although not all patients have classic risk factors. Currently, only biopsy can distinguish simple steatosis from steatohepatitis, although noninvasive markers may also be considered in clinical practice.

Overall, he said, “noninvasive markers may be as ‘good’ or as ‘flawed’ as a liver biopsy, and may complement a liver biopsy rather than replace it—time will tell.”

Dr. Reddy, professor of medicine and surgery and director of hepatology at the University of Pennsylvania, Philadelphia, reported Mark Czaja, Pharm.D., vice president of HealthCore Inc., a Wilmington, Del.-based research firm.

The study was funded and conducted on behalf of Novartis Pharmaceuticals Corp., manu- facturer of several drugs for irritable bowel syndrome (IBS) and constipation.

Dr. Czaja and his associates identified 100,143 patients with newly diagnosed IBS in the HealthCore Managed Care Data- base, which contains medical records for 12 million people. They matched these patients by age and gender to 100,143 controls who saw a physician for a reason other than irritable bowel syndrome during the study pe- riod from January 2000 to Feb- ruary 2005.

The same database was used to identify 81,999 patients with newly diagnosed constipation and age- and gender-matched controls.

During a median follow-up time of about 18 months, there were 167 cases of ischemic colitis among the IBS patients, com- pared with 77 cases among the matched controls (90.37 cases per 100,000 patient-years, com- pared with 41.47 cases per 100,000 patient-years). In a mul- tivariate model, the relative risk of ischemic colitis was 8.16 for the IBS patients, compared with the controls.

Among the constipation pa- tients, there were 199 cases of is- chemic colitis, compared with 64 cases in matched controls (80.44 cases per 100,000 patient-years, compared with 43.03 cases per 100,000 patient-years).

In the multivariate model, the relative risk of ischemic colitis was 2.6 for the constipation pa- tients, compared with the con- trol patients.

When the researchers exam- ined 1-year follow-up data, the data supported “an even stronger relationship” between IBS or constipation and ischemic colitis, they reported in the poster presentation.

Ischemic Colitis Risk Rises With IBS, Constipation

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HOMEMADE RECIPE MATCHES PSYLLIUM FOR CONSTIPATION RELIEF

The Pantry Solution

1 cup applesauce
1 cup unprocessed wheat bran
¼ cup prune juice

The recipe contains applesauce, unprocessed wheat bran, and prune juice cost about half as much as a commercial psyllium product. Kon- syl, reported Dr. Peter Drewes and his associates from the medical cen- ter in a poster presented at the an- nual meeting of the Society of Gy- necologic Surgeons.

Constitution is a problem for 4.5 million American adults, particularly older women, the authors noted. It is the primary reason for 2.5 million physician visits and the sale of $800 million in over-the-counter products each year.

Participants for the trial were drawn from patients presenting to the university’s urogynecology clinic who met Rome II criteria for consti- pation (at least 12 weeks in the prior 12 months of at least two symptoms, including fewer than three defecations/week, straining, hard stools, and incomplete evacuation).

A total of 82 patients were ran- domized and 53 completed the 6- week study, including 30 random- ized to take 1 teaspoon of psyllium in 8 ounces of liquid daily for 6 weeks or 4 tablets a day of the bowel recipe. All of the participants received educational information on how dietary choices and fluids can influ- ence constipation. They all kept bowel diaries.

Results were calculated using pre- and posttrial scores on a 3-point constipation scoring system, with a higher score indicating more severe constipation.

Constipation was relieved in all groups, with scores declining from 13.9 to 9.0 for the psyllium users and 13.6 to 8.5 for the recipe users during the 6-week trial.

The cost of 6 weeks’ worth of the bowel recipe was $8.65, compared with $16.72 for the commercial psyl- lium product.

The authors of the poster con- cluded that the homemade recipe was “an effective and economical stool bulking agent for the treatment of constipation.”

Homemade Recipe Matches Psyllium for Constipation Relief

Bowel Movements in Patients Taking Opioids

Averaged Increase in SBMs per Week

<table>
<thead>
<tr>
<th>Opioid</th>
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<th>1 mg once daily</th>
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<th>Placebo</th>
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Note: Based on a study of 522 patients receiving opioid treatment.
Source: Dr. Lynn Webster

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