

Liver damage in hepatitis C patients significantly underestimated

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Electron micrographs of hepatitis C virus purified from cell culture. Scale bar is 50 nanometers. Credit: Center for the Study of Hepatitis C, The Rockefeller University.

The number of hepatitis C patients suffering from advanced liver damage may be grossly underestimated and underdiagnosed, according to a study led by researchers at Henry Ford Health System and the U.S. Centers for Disease Control and Prevention.

The findings were the result of a study of nearly 10,000 [patients](#) suffering from [hepatitis](#) C, and could have a significant effect on patient care and healthcare policy regarding the chronic disease.

"Knowledge of the prevalence of [liver damage](#) will help decision making regarding screening for the effects of hepatitis C, when to start anti-viral therapy, and the need for follow-up counseling," says Stuart Gordon, M.D., lead researcher and Director of Hepatology at Henry Ford Hospital.

The Chronic Hepatitis Cohort Study is an analysis of records from a large, geographically and racially diverse group of 9,783 patients receiving care at four large U.S. health systems: Henry Ford Health System in Detroit; Kaiser Permanente Northwest in Portland, Oregon; Kaiser Permanente in Honolulu and Geisinger Health System in Danville, Pennsylvania.

The records analyzed by the researchers indicated evidence of liver damage, or [cirrhosis](#), in 29% or 2,788 of the hepatitis C patients included in the study. But surprisingly, 1727 of those 2,788 patients, or 62% of those suffering from liver damage, had no formal documentation in their medical records that they had cirrhosis.

The results suggest cirrhosis may be underdiagnosed in a large segment of the population, he added. Clinicians typically rely on liver biopsies to diagnose cirrhosis. But in the hepatitis C patients studied, only 661 patients were diagnosed with cirrhosis through a liver biopsy.

"Our results suggest a fourfold higher prevalence of cirrhosis than is indicated by biopsy alone," says Gordon.

The researchers discovered highly likely signs of liver damage by calculating the patients' liver enzymes, platelet counts and age in a

previously validated test called a FIB-4 score.

"It's an under-appreciated, easily obtained and, widely available test done through lab work that can point out there's a problem," says Dr. Gordon. "It's a simple test not routinely used by clinicians. A lot of patients in our study had cirrhosis and probably didn't know they had cirrhosis. In addition, electronic medical record reports may not be a reliable indicator of just how many hepatitis C patients may be suffering from cirrhosis."

Hepatitis C is a viral infection that causes inflammation and infection of the liver. The U.S. Centers for Disease Control and Prevention's Division of Viral Hepatitis estimates 2.7 to 3.9 million people in the United States currently suffer from chronic hepatitis C. Without treatment, the virus over time can cause liver cancer or cirrhosis, which can lead to liver failure.

"Sometimes the clues of liver damage or cirrhosis are very subtle - a dropping platelet count, a spleen size that is slightly increased on an ultrasound," says Dr. Gordon. "It is not unusual for patients with hepatitis C to come in and they have liver cancer, and they didn't even know that they had cirrhosis that led to their cancer."

The results could have wide impact on the treatment of those with hepatitis C, a disease now curable in many cases with oral antivirals.

"People with hepatitis C need to find out the severity of their underlying liver disease, because they may not realize that they have cirrhosis," says Dr. Gordon. "Obviously, treatment can slow down the progression."

Provided by Henry Ford Health System

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