

Lean patients with fatty liver disease have higher mortality rate

4 May 2014

Despite being of a healthier weight, lean patients with nonalcoholic fatty liver disease (NAFLD) have a higher overall mortality rate than patients with NAFLD who are overweight or obese, according to new research presented today at Digestive Disease Week® (DDW). In addition to finding higher mortality rates, an international team of researchers found that lean patients [a body mass index (BMI) less than 25] with NAFLD were more likely to be male, non-Caucasian and to have lower rates of chronic conditions, such as diabetes and hypertension.

"Our comparison of lean patients and their overweight or obese counterparts gives us clues about risk factors for this disease that go beyond a person's weight," said Paul Angulo, MD, section chief of hepatology in the division of digestive diseases and nutrition at the University of Kentucky Medical Center. "These findings have implications both for future research and for current standards of care. We must not assume that patients of relatively healthy weight can't have [fatty liver disease](#)."

The retrospective study is the first of its kind in detailing the characteristics of a large number of lean patients with NAFLD. The study examined more than 20 years' worth of clinical and laboratory data of more than 1,000 patients with biopsy-confirmed NAFLD. Lean patients had an average BMI of 23 and the non-lean group had an average BMI of 33.

The lean group had significantly less insulin resistance as well as lower levels of a [liver enzyme](#) called alanine aminotransferase (ALT) that correlates with liver damage. And while lean patients had a lower degree of fatty deposits on the liver and less advanced fibrosis, these patients showed more severe inflammation of the liver.

Of the 1,090 patients, liver biopsy was done before 2005 in 483 patients. In this subgroup, nine of the

32 (28 percent) lean patients died compared to 62 of the 451 (14 percent) overweight or obese patients. In examining the specific cause of mortality, researchers did not find any differences between the two groups.

"About 30 percent of the U.S. population suffers from NAFLD, and the prevalence of this condition is increasing. Although we often associate fatty [liver disease](#) with [obese patients](#), these results suggest that possible signs of liver disease secondary to NAFLD in lean patients should be taken very seriously," said Dr. Angulo.

Dr. Angulo and his team plan to expand on their findings about this specific patient population by examining data beyond BMI, including fat distribution and differences in cell signaling proteins, such as cytokine and adipokine profiles. They also plan to include patients who have not yet had a [liver biopsy](#).

Dr. Paul Angulo will present data from the study "Characteristics and long-term prognosis of lean patients with [nonalcoholic fatty liver disease](#)," abstract 379, on Sunday, May 4, at 2:45 p.m. CT, in room S405A of McCormick Place.

Provided by Digestive Disease Week

APA citation: Lean patients with fatty liver disease have higher mortality rate (2014, May 4) retrieved 14 May 2021 from <https://medicalxpress.com/news/2014-05-patients-fatty-liver-disease-higher.html>

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