Even Lean People With HIV Can Get Fatty Liver Disease

Nearly a quarter of lean HIV-positive people in a recent study had NAFLD, and 16% of them developed fibrosis.

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Almost a quarter of lean people living with HIV had evidence of nonalcoholic fatty liver disease (NAFLD) in a recent study, and nearly one in five of them developed substantial liver fibrosis, putting them at higher risk for cirrhosis and liver cancer, according to a recent study.

NAFLD and its more severe form, nonalcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide, and studies have shown that the condition is common among people living with HIV. Although often associated with obesity and metabolic syndrome—a constellation of cardiovascular risk factors including abnormal blood sugar and blood fat levels, hypertension (high blood pressure) and increased abdominal girth—fatty liver disease can also occur in people of normal weight.

The accumulation of fat in the liver triggers inflammation, which over time can lead to the development of fibrosis (buildup of scar tissue), cirrhosis (advanced scarring) and liver cancer. With no effective approved medical therapies, management relies on lifestyle changes such as weight loss and exercise.

As described in Clinical Infectious Diseases, Adriana Cervo, MD, of McGill University Health Centrein Montreal, and colleagues looked at rates of NAFLD among participants in three cohort studies of metabolic and liver disease among people with HIV in Canada and Italy.

This retrospective analysis included 1,511 people living with HIV. Three quarters were men, more than 80% were white and the average age was 50. More than half (57%) were classified as lean or normal weight, meaning they had a body mass index (BMI) below 25.0. In addition, 31% were classified as overweight (BMI of 25.0 to 29.9), while 11% were classified as having obesity (BMI 30.0 or higher). People with hepatitis B or C, which can also cause liver fibrosis, were excluded, as were those who reported heavy alcohol consumption.

NAFLD was diagnosed using FibroScan transient elastography, a noninvasive technique that measures liver stiffness and is usually used to assess liver fibrosis.

Overall, in the three cohorts combined, 24% of lean participants had NAFLD, and lean people with NAFLD accounted for 14% of the entire study population.

Compared with lean participants without NAFLD, lean people with NAFLD were older, had a higher BMI, had lived with HIV longer, were more likely to have ever had a CD4 count below 200 and were more likely to have taken older HIV drugs, such as Videx (ddI, or didanosine) or Zerit (d4T, or stavudine). However, they also had a higher current CD4 count, were more likely to have undetectable HIV viral load and were more likely to have used integrase inhibitors, the newest class of antiretrovirals.

Lean people with NAFLD were more likely than lean participants without NAFLD to have metabolic abnormalities (62% versus 49%, respectively) and abnormal ALT liver enzyme levels (37% versus 24%). Those in the lean NAFLD group were significantly more likely to have hypertension than those without NAFLD (27% versus 19%), but rates of diabetes were similar (about 12% in both groups). Smoking rates and history of past cardiovascular events were also similar.

The researchers found that lean people with NAFLD were twice as likely as lean people without NAFLD to have substantial liver fibrosis or cirrhosis (16% versus 8%, respectively). In the lean NAFLD group, 12% had substantial fibrosis, and 4% had cirrhosis. In fact, liver fibrosis or cirrhosis were about as common among lean people with NAFLD as they were among overweight participants with NAFLD. What's more, fibrosis progression in lean people with NAFLD was comparable to that of people who were were overweight or had obesity.

After adjusting for demographic factors, hypertension and HIV-related factors, the independent risk factors for NAFLD among lean people were older age, high triglycerides and high ALT levels. Having a higher HDL, or "good" cholesterol, level was a protective factor.

Based on these findings, the study authors proposed that older people with HIV who have abnormal blood lipid levels and elevated ALT should be evaluated for fatty liver disease, even if they have a normal body weight.

Click here to read the study abstract.

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