

Fatty liver in people with HIV

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What is the background to this research?

Fatty liver is a disease of the liver that in the long run (process of years) may lead to scarring of the liver. Furthermore, fatty liver may also be a risk factor for cardiovascular disease. Worldwide, fatty liver disease affects about a quarter of all adults. People who have obesity are especially at risk for fatty liver disease. Various studies suggest that fatty liver disease occurs more often in people with HIV than in people without HIV. This may be because of HIV itself, or because of the effects of (older) HIV medicines.

What did we want to investigate?

Most of the studies exploring fatty liver in HIV have been done including a limited number of people. The study population of the 2000HIV study is large, and participants are also extensively mapped. What do we want to investigate:

1. How common is fatty liver disease in people with HIV?
2. Why do people with HIV develop fatty liver?

We analyze various factors such as sex, age, presence of other diseases (e.g. diabetes), laboratory abnormalities (e.g. elevated cholesterol), factors specific to HIV (e.g. decreased CD4 cell count), and factors associated with HIV medication (e.g. whether someone has ever been treated with stavudine).

What did we do?

A FibroScan was made in participants of the 2000HIV study, which provides indicators for presence of fatty liver disease. Based on these values, we analyzed how often fatty liver disease is present in people with HIV. Subsequently, we investigated which factors could be predictors of fatty liver disease.

What did we find?

We found that fatty liver disease occurs in 47% of our participants, which is nearly twice as much as in people without HIV. Age, weight (BMI), subcutaneous fat layer thickness, diabetes (type 2), increased ALT (a liver enzyme) in the blood, sugar levels in the blood, changes in various lipids in the blood (increased cholesterol, LDL, VLDL, and triglycerides, and decreased HDL), increased CD4 and CD8 cell count at study enrollment, and longer duration of treatment with integrase inhibitors, stavudine, raltegravir, were all predictors of fatty liver disease.

What does this mean for people living with HIV?

Fatty liver occurs in about half of people with HIV. Although traditional risk factors such as obesity and changes in lipids levels in the blood are main predictors of fatty liver disease (these are also risk factors for people without HIV), we also saw a few HIV medicines that predict whether someone may have a fatty liver. We want to investigate this further.

Do you have any questions about the study?
Reach out to us via the contact form on our
website www.2000hiv.com