



Risk of Cardiovascular Disease Associated with HCV and HBV Coinfection among Antiretroviral-treated HIV-infected Individuals

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The question

What is the risk of cardiovascular disease among people living with HIV who are on antiretroviral therapy (ART) and who are also coinfecting with either hepatitis B (HBV) or hepatitis C (HCV)?

The answer

People living with HIV who are taking ART and who are also coinfecting with HCV experience more cardiovascular disease than people with HIV who are not coinfecting. The same is not true for people coinfecting with HIV and HBV. To minimize poor health outcomes associated with cardiovascular disease, people coinfecting with HIV and HCV may consider starting HCV antiviral treatment and modifying other common risk factors for cardiovascular disease.

Why is this question important?

Coinfection with HCV, and to a lesser extent HBV, is common among people living with HIV. While there has been research on the association between hepatitis coinfections and the risk of cardiovascular disease among people living with HIV currently taking ART, the results of these international studies are not consistent. More research was needed to better understand these associations.

How was the study conducted?

The study used the information from OCS participants who had ever started taking ART and did not have any history of cardiovascular disease (total=4501). Of this group, there were 653 who were coinfecting with HCV, 349 who were coinfecting with HBV and another 83 who were tri-infected with HIV, HCV and HBV. These patients were followed over time and information on whether they experienced any cardiovascular disease or “events” was recorded and compared. The study authors were interested in how much time passed between starting on ART to experiencing any cardiovascular events, including coronary bypass, angioplasty, atherosclerosis, chronic ischemic heart disease, arteriosclerotic vascular disease, myocardial infarction, congestive heart failure, cerebrovascular accident or stroke, and sudden cardiac death.



What's next?

People living with HIV and HCV may have a higher risk of developing cardiovascular disease. Although more research is needed, treating HCV with antivirals may reduce the risk of cardiovascular disease among people who are HIV-HCV coinfecting. Traditional risk factors for cardiovascular disease, such as smoking, drug and alcohol use, poor diet, and low activity levels are still the largest contributors to cardiovascular disease in this population, and therefore interventions to improve healthy behaviours are still the best solution to reduce risk of cardiovascular disease among people living with HIV and HCV, and/or HBV.

Want to know more?

This study was published in the Journal of Antiretroviral Therapy. The full text version is available at:

<http://www.ncbi.nlm.nih.gov/pubmed/24429380>

The **Ontario HIV Treatment Network Cohort Study (OCS)** is an ongoing research study that collects clinical, social and behavioural information about people living with HIV (PHA) in Ontario. Participation in the study is voluntary, and all personally identifying information of study participants is removed to ensure confidentiality. The OCS was established to improve our understanding of HIV and to inform HIV prevention, care and treatment strategies for people living with HIV and groups at increased risk of HIV infection. For more information about the OCS, please contact the OCS Research Coordinator, Brooke Ellis at: bellis@ohtn.on.ca.