Changes to fats and sugar in the blood because of hepatitis C

HCV infection of the liver is the trigger for inflammation and damage to that organ. But the effect of HCV on levels of lipids (cholesterol and triglycerides) and blood sugar is not well understood.

Researchers with the American AIDS Clinical Trials Group (ACTG) conduct clinical trials with HIV positive participants. In one study, ACTG 5095, researchers compared the anti-HIV effects of different combinations of medications. They also analysed blood samples from HCV positive study volunteers for changes in lipids and sugar. Their findings, from a study of about 1,000 participants, suggest that HCV infection appears to be linked to an increased risk of pre-diabetes and diabetes.

**Study details**

Researchers recruited 1,052 HIV positive participants whose average profile at the start of the study was as follows:

- 20% female, 80% male
- age – 38 years
- CD4+ count – 209 cells
- HIV viral load – 63,000 copies

In total, 108 participants (56% of whom disclosed that they injected street drugs) tested positive for antibodies to HCV and were presumed to be co-infected with this virus.

In ACTG 5095, participants were randomly assigned to receive one of the following three regimens:

- AZT (zidovudine, Retrovir) + 3TC (lamivudine) + abacavir (Ziagen)
- AZT + 3TC + efavirenz (Sustiva, Stocrin)
- AZT + 3TC + ABC + efavirenz

In this issue of *TreatmentUpdate*, we will focus on the metabolic results of this trial.

**Results**

Over a period of two years, researchers found the following changes in HCV positive co-infected people:

- levels of so-called bad cholesterol (LDL-c) remained relatively stable
- insulin resistance (suggestive of pre-diabetes) grew worse
- triglyceride levels fell

All of these changes were modest yet statistically significant.

At the start of the study, rates of diabetes were similar in people with HIV and those who had both HIV and HCV. However, by the second year of the study, rates of diabetes were three times greater among co-infected people. Exactly why this difference emerged is not clear but the difference was also statistically significant.

More research is needed to explore the link between HCV, diabetes and HIV treatment.

The results from ACTG 5095 underscore the case for testing for HCV and treating this infection early so as to minimize future complications.

**REFERENCE:**
Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

CATIE provides information resources to help people living with HIV and/or hepatitis C who wish to manage their own health care in partnership with their care providers. Information accessed through or published or provided by CATIE, however, is not to be considered medical advice. We do not recommend or advocate particular treatments and we urge users to consult as broad a range of sources as possible. We strongly urge users to consult with a qualified medical practitioner prior to undertaking any decision, use or action of a medical nature.

CATIE endeavours to provide the most up-to-date and accurate information at the time of publication. However, information changes and users are encouraged to ensure they have the most current information. Users relying solely on this information do so entirely at their own risk. Neither CATIE nor any of its partners or funders, nor any of their employees, directors, officers or volunteers may be held liable for damages of any kind that may result from the use or misuse of any such information. Any opinions expressed herein or in any article or publication accessed or published or provided by CATIE may not reflect the policies or opinions of CATIE or any partners or funders.

Information on safer drug use is presented as a public health service to help people make healthier choices to reduce the spread of HIV, viral hepatitis and other infections. It is not intended to encourage or promote the use or possession of illegal drugs.

Permission to Reproduce

This document is copyrighted. It may be reprinted and distributed in its entirety for non-commercial purposes without prior permission, but permission must be obtained to edit its content. The following credit must appear on any reprint: This information was provided by CATIE (the Canadian AIDS Treatment Information Exchange). For more information, contact CATIE at 1.800.263.1638.

© CATIE

Production of this content has been made possible through a financial contribution from the Public Health Agency of Canada.

Available online at: