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:
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