Enzyme Related to Heart Disease No Higher in HIV-Positive Women

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Good news for HIV-positive women: They are no more likely than HIV-negative women to have elevated levels of plasma homocysteine (HCY), an enzyme associated with coronary heart disease, clogged arteries and strokes, according to a study published in the June issue of *The Journal of Acquired Immune Deficiency Syndromes*. The study also found that current use of antiretroviral (ARV) therapy does not appear to increase HCY levels either.

Researchers have well established that elevated HCY can have significant cardiovascular health consequences. The enzyme is also believed to be responsible for atherosclerosis—the formation and hardening of plaques in the arteries—which can result in high blood pressure and blood clots that can cause heart attacks and strokes.

Recent research indicates that people with HIV face a much higher risk for cardiovascular disease than their HIV-negative age-matched peers. HIV itself is believed to be responsible for much of the increased risk, but ARV therapy has also been associated with an elevated risk.

To determine whether HCY is elevated in HIV-positive women, Farbod Raiszadeh, MD, PhD, from the Columbia University College of Physicians & Surgeons in New York City, and his colleagues from the Women's Interagency HIV Study (WIHS) examined blood plasma from 249 HIV-positive and 127 HIV-negative women enrolled at the Bronx site of the study. On average, the HIV-positive women were slightly older and had a lower ratio of height to weight than HIV-negative women.

Elevated HCY levels were present in 16.9 percent of HIV-positive women and 13.4 percent of HIV-negative women. The difference was not statistically significant, meaning that it was small enough to have occurred by chance. Current use of ARV therapy did not significantly increase the chance that an HIV-positive woman would have elevated HCY levels. However, age and elevated kidney enzymes were associated with higher HCY levels.

The authors also comment that there was an association between elevated HCY levels and decreased levels of vitamin B-12. They hypothesize that B-12 treatment could potentially lower HCY levels.

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