Antiretrovirals Diminish Artery Hardening

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HIV-positive people taking antiretroviral (ARV) therapy have less hardening of the arteries than HIV-positive people not on therapy, say the authors of a study published in the August 20 issue of *AIDS*.

Evidence that ARV treatment can protect the heart in people living with HIV continues to accumulate. First, the SMART study found that people who stopped or paused their ARV treatments had a greater risk of heart attacks than people who remained on ARV therapy. Subsequent research has demonstrated that inflammation in the heart and arteries is greater in people with detectable virus.

To determine the impact of ARV therapy on coronary artery calcification (CAC)—hardening of the arteries—Lawrence Kingsley, DrPH, from the University of Pittsburgh in Pennsylvania, and his colleagues conducted tests to measure CAC in a group of patients enrolled in the Multicenter AIDS Cohort Study (MACS). Of the 947 male study volunteers included in the analysis, 332 were HIV negative, 84 were HIV positive and not taking ARV treatment, and 531 were HIV positive and taking ARV treatment.

In all, 32 percent of the patients were diagnosed with CAC. The strongest predictor of CAC was older age, as would be expected. Smokers, those with a family history of coronary heart disease and those with high levels of LDL cholesterol were also likely to have CAC.

As for HIV factors, CAC was slightly more common in people with HIV taking ARV therapy, compared with HIV-negative study subjects. However, when Kingsley's team looked at the degree of calcification, they found that people who had been taking ARV therapy the longest actually had average CAC scores that were 34 percent lower—less hardening of the arteries—than both HIV-positive patients not on ARV therapy and HIV-negative patients.

The authors note that the use of lipid-lowering medication among the HIV-positive patients may have influenced the study results. Researchers indicate they will conduct a three-year follow-up assessment. In the meantime, however, the results add to the evidence that ARV therapy may be cardio-protective.

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