Viral Load Tied to Kidney Function

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As viral load increases so does the risk of kidney problems, according to a study published in the June 1 issue of AIDS and reported by aidsmap. Fortunately, with decreases in viral load and increases in CD4 cells resulting from antiretroviral (ARV) treatment, kidney function is likely to improve.

Studies show that kidney failure and reduced kidney function are more likely among people living with HIV than their HIV-negative peers. Though some ARV treatments—notably tenofovir (found in Viread, Truvada and Atripla)—are associated with potential kidney problems, researchers are still working out the specific factors associated with kidney disorders in HIV.

One such effort was undertaken by Chris Longenecker, MD, from the University of California in San Francisco, and his colleagues, who analyzed a group of 554 HIV-positive patients and 230 HIV-negative individuals participating in the Fat Redistribution and Metabolic Change in HIV infection (FRAM) study. Overall, Longenecker and his colleagues found that kidney function was much more variable in people with HIV than in HIV-negative patients. While HIV-positive patients were twice as likely to see reductions in their kidney function, they were also seven times more likely to see improvements as well. Also, people who had increases in their CD4 counts were likely to have improvements in kidney function.

When the researchers looked at the specific factors affecting kidney function, they found that an increase in viral load was tied to a reduction in kidney function, while significant viral load reductions in response to ARV treatment were associated with improvements in kidney function. Also, people who had a higher viral load at the start of the study were more likely to see a decline in kidney function.

“Our results suggest that HIV viral replication is a primary pathogenic factor in the development of kidney disease in HIV-infected persons and a potential therapeutic target for HIV-related kidney disease,” Longenecker’s group concludes.