HIV Treatment Linked to Faster Kidney Function Decline Among Men

That’s compared with HIV-negative men.

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Men living with HIV who are on antiretroviral (ARV) treatment experience faster decline in their kidney function compared with HIV-negative men, aidsmap reports.

Publishing their findings in the journal AIDS, researchers studied data from the Multicenter AIDS Cohort on 917 HIV-positive men on ARVs, 159 HIV-positive men not on ARVs and 1,305 HIV-negative men. The study period ran from October 2003 to September 2014.

The researchers looked at two measures of kidney health over time. The first was the men’s estimated glomerular filtration rate (eGFR), an indication of kidney function. Normal kidney function is defined as an eGFR above 90, while an eGFR of 30 to 60 indicates moderately reduced kidney function, and an eGFR below 30 indicates severely reduced kidney function. The second was proteinuria, the presence of which indicates a higher risk of kidney disease progression.

The median eGFR upon entry into the study was 90 among the HIV-negative men, 94 among the HIV-positive men on ARVs and 97 among the HIV-positive men not on ARVs. The median annual decline in eGFR was 0.3 percent among the HIV-negative and 0.8 percent among the HIV-positive men.

Factors associated with experiencing more than a 3 percent annual decline in eGFR included ARV treatment, being older than 50, high blood pressure, diabetes and currently smoking.

A total of 14.9 percent of the HIV-positive men on ARVs, 5.8 percent of the HIV-positive men not on ARVs and 1.9 percent of the HIV-negative men had proteinuria. Having proteinuria was associated with a 1.8-fold greater likelihood of experiencing a greater than 3 percent annual decline in eGFR.

Factors associated with having proteinuria included being HIV positive and on ARVs (compared with being HIV negative), being at least 50 years old (compared with being younger than 40), diabetes, high blood pressure, currently smoking and hepatitis C virus (HCV) infection. Among HIV-positive men, having a lower CD4 count and having been treated with Videx (didanosine, or ddI), Invirase (saquinavir) or Viracept (nelfinavir) were each associated with having proteinuria.

After adjusting the data to account for proteinuria, factors associated with experiencing a greater than 3 percent annual decline in eGFR among those on ARVs included having a detectable viral load and cumulative use of Viread (tenofovir disoproxil fumarate, or TDF), Emtriva (emtricitabine), Norvir (ritonavir), Reyataz (atazanavir), any protease inhibitor or the antifungal Diflucan (fluconazole).

Emtriva was likely associated with such a decline in kidney function only because it is always paired with Viread in combination tablets, including Truvada (tenofovir disoproxil fumarate/emtricitabine), Atripla (efavirenz/tenofovir disoproxil fumarate/emtricitabine), Complera (rilpivirine/tenofovir disoproxil fumarate/emtricitabine), Stribild (elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil fumarate) and Genvoya (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide). More recently, all these tablets—except for—Atripla have been updated with a new version of tenofovir, called tenofovir alafenamide, which is considered safer for the kidneys.

To read the aidsmap article, click here.

To read the study abstract, click here.

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