Updated Tenofovir Is Safer for Bones and Kidneys

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Switching from the standard form of Viread (tenofovir disoproxil fumarate, TDF) to an updated version (tenofovir alafenamide, TAF) offers slightly better viral suppression and improves indicators of kidney and bone health, HIVandHepatitis reports. Results from the Phase III GS-US-292-0109 study of 1,436 treatment-experienced people with HIV switching from a TDF-inclusive to a TAF-inclusive antiretroviral regimen were presented at the 8th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention in Vancouver, British Columbia.

The participants had normal kidney function upon entering the study and a fully suppressed viral load following at least 96 weeks of treatment with Stribild (elvitegravir/cobicistat/TDF/emtricitabine); Atripla (efavirenz/TDF/emtricitabine); or Reyataz (atazanavir) boosted with Norvir (ritonavir) or Tybost (cobicistat), plus Truvada (TDF/emtricitabine).

They were randomly assigned, two-to-one, to either stay on their TDF-inclusive regimen or switch to a TAF-inclusive version of Stribild (which is up for approval from the U.S. Food and Drug Administration).

Forty-eight weeks into the study, 97 percent of those taking the TAF-inclusive regimen had an undetectable viral load, as did 93 percent of those taking TDF-inclusive regimens. This difference was statistically significant, meaning it did not likely occur by chance and indicating that TAF is better at suppressing HIV. The better response rates were driven by those who switched from Atripla or the Reyataz combination.

A total of 0.9 percent of those taking TAF stopped treatment because of adverse side effects, compared with 2.5 percent among those taking TDF. Two of those taking TAF and five taking TDF stopped treatment because of kidney-related side effects. No one in the TAF group developed Fanconi syndrome, a serious form of kidney disease; one person in the TDF group did.

Indicators of kidney health improved in those who switched to TAF, while they worsened among those staying on TDF.

Bone mineral density in the spine and hip increased by an average of 1.79 percent and 1.37 percent, respectively, in the TAF group, and decreased by 0.28 percent and 0.26 percent in the

TDF group. Those who switched to TAF experienced improvements in osteopenia or osteoporosis of the spine and hip, while those who stayed on TDF saw no change.

To read the HIVandHepatitis article, click here.

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