Switching HIV Meds From TDF to TAF Tied to Rise in Cholesterol

Tenofovir alafenamide is an updated version of tenofovir disoproxil fumarate that is tied to better bone and kidney health.

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People with HIV who switch from taking tenofovir disoproxil fumarate (TDF) to taking tenofovir alafenamide (TAF) as a component of their antiretroviral (ARV) regimen may experience an increase in their cholesterol, aidsmap reports.

Gilead Sciences developed TAF as an ostensibly safer version of its mainstay ARV, TDF. Research has indicated that the newer version of tenofovir is associated with improvements in markers of bone and kidney health among people with HIV as well as HIV-negative people taking pre-exposure prophylaxis (PrEP).

TDF, sold as a stand-alone pill under the brand name Viread, is included in the combination tablets Atripla, Complera, Stribild, Delstrigo, Symfi, Symfi Lo, Temixys, Cimduo and Truvada. TAF is sold as an individual tablet under the brand name Vemlidy and is approved for hepatitis B virus treatment (as is Viread) and is included in the combination HIV treatment tablets Genvoya, Odefsey, Descovy, Biktarvy and Symtuza. Truvada and Descovy are each approved for use as PrEP.

The new study, which was published in the journal AIDS, included 164 people with HIV attending a pair of HIV clinics in Dublin who switched from TDF to TAF between January 2016 and July 2017. Fifty-six participants also switched other ARVs in their regimens at the same time they switched to TAF.

The participants were 56 years old on average. Seventy-one percent were men, 69% were white and 26% were Black.

Twenty-four percent of the cohort were taking a statin medication to lower their blood lipids before switching to TAF. An additional 2.1% started such treatment after switching.

Before switching to TAF from TDF, 5.2% of the participants had cholesterol levels indicative of “very high-grade abnormal” blood lipids, a figure that rose threefold to 15.5% after the switch. The proportion of the participants with abnormally high LDL (“bad”) cholesterol rose 1.5-fold, from 23.7% to 36.6%.

Among the 44% of participants who switched only from TDF to TAF, there were similar rises in total cholesterol and slightly higher rises in LDL cholesterol compared with the study group as a whole.

Among those already taking statins upon switching to TAF, cholesterol did not rise.

After adjusting the data to account for various differences between the participants, the study authors found that the one factor associated with worsening total and LDL cholesterol levels was having had high levels prior to making the switch.

One factor that may drive the post-switch rise in cholesterol is that TDF can actually have a suppressive effect on cholesterol. So switching from that drug may in and of itself result in a loss of this effect, causing cholesterol to rise.

“These data suggest clinically relevant, worsening lipid profiles post-switch to TAF, with a larger proportion of [people with HIV] exceeding recommended lipid thresholds post-switch. How these changes will impact on cardiovascular risk or need for [lipid-lowering therapy] remains to be determined,” the study authors concluded.

To read the aidsmap article, click here.

To read the study abstract, click here.

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