Switching to New Tenofovir Is Tied to Higher LDL Cholesterol

Researchers call for closer cardiovascular monitoring for those switching from the TDF form of the drug to the TAF version.

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People with HIV who switch from the older form of the antiretroviral (ARV) tenofovir to the newer form are more likely to have out-of-target LDL cholesterol, the National AIDS Treatment Advocacy Project (NATAP) reports. Consequently, Italian researchers have called for closer cardiovascular monitoring of people switching from the older form to the newer one.

The older form of tenofovir is known as tenofovir disoproxil fumarate, or TDF; the newer form is called tenofovir alafenamide, or TAF. Switching from TDF to TAF is associated with improved markers of bone and kidney health. However, researchers have suggested that this benefit may be significant only if both drugs are used with a booster medication, Norvir (ritonavir) or Tybost (cobicistat).

Gilead has swapped TAF into all its combination tablets that include TDF, with the exception of Atripla (efavirenz/tenofovir disoproxil fumarate/emtricitabine), which is no longer a recommended first-line treatment because of side effects associated with the Sustiva (efavirenz) component. The updated TAF-inclusive tablets have new brand names and include Descovy (emtricitabine/tenofovir alafenamide), Odefsey (emtricitabine/rilpivirine/tenofovir alafenamide) and Genvoya (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide). Two new single-tablet regimens have also recently been approved that have no TDF-inclusive equivalent, including Gilead's Biktarvy (bictegravir/emtricitabine/tenofovir alafenamide) and Janssen's Symtuza (darunavir/cobicistat/emtricitabine/tenofovir alafenamide).

TAF is also approved for use as treatment for hepatitis B virus (HBV) treatment under the brand name Vemlidy, just as TDF has long been approved for this purpose under the brand name Viread.

Presenting their findings at the International Congress on Drug Therapy in HIV Infection (HIV Glasgow) in Scotland, Italian researchers conducted a retrospective analysis of 221 people with HIV who switched from TDF to TAF treatment without changing their anchor ARV. A total of 45.7 percent of them took a Tybost-boosted integrase inhibitor, 43.3 percent took a non-nucleoside reverse transcriptase inhibitor (NNRTI), 6 percent took a Tybost-boosted protease inhibitor and 5 percent took an unboosted integrase inhibitor.

Before switching to TAF, the cohort’s median LDL cholesterol was 105 milligrams per deciliter.

After the switch to TAF, total and LDL cholesterol each rose by about 20 percent among the cohort members; HDL cholesterol rose by about 5 percent. Before the tenofovir switch, about 35 percent of the 200 people analyzed had LDL cholesterol that was considered out of target. This proportion increased to 60 percent after the cohort members switched to TAF.

To read the NATAP report, click here.

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