Switching to New Tenofovir Tied to Improved Bone Health in Older People With HIV

Participants entered the study taking tenofovir disoproxil fumarate, and some were switched to a regimen including tenofovir alafenamide.

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People with HIV age 60 and older who switch from a regimen containing tenofovir disoproxil fumarate (TDF) to Genvoya (elvitegravir/cobicistat/tenofovir alafenamide/emtricitabine) experience improvements in bone mineral density, aidsmap reports.

The tenofovir alafenamide (TAF) component of Genvoya is an updated version of TDF that is considered safer for the bones and kidneys but has also been associated with increases in cholesterol.

TDF is a component of the Truvada (tenofovir disoproxil fumarate/emtricitabine), Atripla (efavirenz/tenofovir disoproxil fumarate/emtricitabine), Complera (rilpivirine/tenofovir disoproxil fumarate/emtricitabine), Stribild (elvitegravir/cobicistat/tenofovir disoproxil fumarate/emtricitabine) and Delstrigo (doravirine/tenofovir disoproxil fumarate/lamivudine) combination tablets.

TAF is a component of the Descovy (tenofovir alafenamide/emtricitabine), Biktarvy (bictegravir/tenofovir alafenamide/emtricitabine), Odefsey (emtricitabine/rilpivirine/tenofovir alafenamide) and Symtuza (darunavir/cobicistat/tenofovir alafenamide/emtricitabine) combination tablets.

Publishing their findings in The Lancet HIV, a research team led by Franco Maggiolo, MD, of the Sacco Hospital in Milan, Italy, recruited 167 people with HIV 60 years old or older who were taking a TDF-containing antiretroviral (ARV) regimen. The participants, who all entered the study with a fully suppressed viral load and were recruited from 36 clinics across Europe, were randomized two-to-one to stay on their current regimen or switch to Genvoya.

The participants received DEXA scans to assess their bone mineral density at the spine and hip upon entering the study and at weeks 24 and 48.

The average age was 66 years old. Eighty-nine percent of the participants were men, and 92% were white. The median CD4 cell count was 634.

At week 48, switching from TDF to TAF was associated with a median 2.24% increase in bone mineral density at the spine and a median 1.33% increase at the hip. Those who stayed on TDF saw a 0.10% and 0.73% decline at the spine and hip, respectively.

When they started the study, about 50% of those in both the TAF and TDF groups had normal bone mineral density at both the spine and hip. After 48 weeks, 56% of the TAF group fell into this category, compared with 46% of the TDF group. Those who received TAF were more likely to experience improvements if they had osteopenia, in which bone density is compromised but not to such a degree that an individual has osteoporosis.

Kidney function tests indicated that TAF had a lower toxicity than TDF on this front.

Those in the TDF group experienced stable cholesterol levels through the 48-week mark, while among those who switched to TAF, LDL cholesterol increased by a median of 24 milligrams per deciliter and triglycerides increased by a median of 31 mg per dl.

To read the aidsmap article, click here.

To read the study abstract, click here.

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