Switching Off Ziagen Is Linked to Healthier Platelets in People With HIV

Ziagen is included in the combination-tablet regimens Triumeq and Trizivir and the two-drug combo tablet Epzicom.

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People who switch from HIV treatment containing the antiretroviral (ARV) Ziagen (abacavir) to a regimen without that drug see their platelet reactivity fall. This finding may help explain the apparently reversible association between Ziagen and cardiovascular disease (CVD).

Ziagen is contained in the single-tablet regimens Triumeq (dolutegravir/abacavir/lamivudine) and Trizivir (abacavir/zidovudine/lamivudine) and in the two-drug combination tablet Epzicom (abacavir/lamivudine).

Patrick W. Mallon, PhD, a lecturer in infectious diseases at University College Dublin led a Phase III randomized double-blind trial that examined the effects of switching people off Ziagen. He presented findings at the 2018 Conference on Retroviruses and Opportunistic Infections (CROI) in Boston.

The participants all had a fully suppressed viral load for at least six months prior to entering the study. All were taking Epzicom plus a third ARV. They were randomized to switch from Epzicom to Descovy (emtricitabine/tenofovir alafenamide) and to maintain their third ARV or to remain on their existing Epzicom-based regimen. A respective 29 and 32 participants were randomized to each group.

Mallon and his research colleagues measured platelet aggregation (the clumping together of platelets in the blood) among the participants upon their entry into the study and at weeks four and 12 of follow-up. Specifically, the investigators looked at how platelets responded to various elements that activate platelets, otherwise known as platelet agonists, including collagen, thrombin receptor-activating peptide, adenosine diphosphate, epinephrine and arachidonic acid.

At the study's baseline, the platelet response to collagen, thrombin receptor-activating peptide and adenosine diphosphate was similar between the two study groups. At week four, platelet aggregation to these three elements was significantly lower in those randomized to take Descovy. However, by week 12 this difference persisted only in the case of platelet response to a collagen-based platelet. Platelet aggregation responding to epinephrine and arachidonic acid did not differ

between the two study groups at any point.

The study authors also found that those in the Descovy group had a higher expression of the collagen receptor GPVI, a collagen receptor expressed on the surface of platelets.

These findings suggested to the scientists various pathways by which Ziagen raises the risk of heart attack.

To read the conference abstract, click here.

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