Abacavir Should (Again) Be a "Preferred" HIV Treatment Option

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Researchers of a new study, published online June 24 in the Journal of Acquired Immune Deficiency Syndromes, found similar rates of treatment success in people taking abacavir plus lamivudine (Epzicom), compared with people taking tenofovir plus emtricitabine (Truvada). Moreover, they conclude that abacavir should once again be listed as a "preferred" option in HIV treatment guidelines.

Three landmark studies during the past three years resulted in the down-grading of abacavir in U.S. HIV treatment guidelines from a "preferred" antiretroviral (ARV) agent for first-line therapy, notably when used in the combination tablet Epzicom, to an "alternative" agent.

Two of those studies, SMART and D:A:D, suggested that people taking abacavir had a higher rate of heart attacks than people on other nucleoside reverse transcriptase inhibitors (NRTIs). A third study, ACTG 5202, found that people on an Epizcom-inclusive regimen for first-line therapy were more likely to experience treatment failure upon starting therapy with a high viral load (over 100,000 copies), compared with people taking a Truvada-inclusive regimen.

Though other studies found no association between abacavir and heart attacks, nor lower efficacy in people starting treatment with high viral loads, the panel of experts and community activists who write U.S. guidelines voted to downgrade Epzicom in 2008. Truvada, however, has remained the preferred NRTI option.

Given the mixed results of these various studies, several European guidelines committees decided not to follow suit and kept Epzicom—branded as Kivexa in Europe—as a preferred regimen. The competing studies and differing guidelines have led to confusion as to the best use of Epizcom in people starting treatment for the first time.

In hopes of clarifying the efficacy of abacavir compared with tenofovir—less concern exists for lamivudine or emtricitabine, as both drugs are very similar—Darrell Tan, MD, from the University of Toronto, and his Canadian colleagues, examined the medical records of 1,764 HIV-positive people who started HIV treatment between 2000 and 2010. An earlier look at the data in a smaller group of people was reported in 2010 at the International AIDS Conference in Vienna.

The Canadian Institutes of Health funded the study, and no conflicts of interest with Epzicom's

manufacturer, ViiV Healthcare, were reported.

For the study, Tan's group directly compared people starting a regimen including abacavir and lamivudine—either separately as Ziagen and Epivir or as Epzicom—with those starting a regimen including tenofovir and emtricitabine—either separately as Viread and Emtriva, or together as Truvada. After Atripla, a combination tablet containing tenofovir, emtricitabine and efavirenz, became available in Canada in 2007, those taking the three-in-one tablet were included in the tenofovir group.

Tan found that when multiple variables were considered, people taking an abacavir regimen were no more likely to experience treatment failure than those taking a tenofovir regimen. This held true even in people who started treatment with viral loads over 100,000.

What's more, the rate at which people were able to suppress their virus over the first few months of treatment—another way of looking at the potency of the treatment regimen—was equivalent between the two groups.

Lastly, people taking abacavir were no more likely to switch or stop treatment for reasons other than virological failure than people taking tenofovir.

Tan's team acknowledges that a primary difference between ACTG 5202 and their study is the fact that people in ACTG 5202 were randomized to receive either abacavir or tenofovir, whereas in their study no randomization occurred. This means that there might have been reasons that a person's provider chose one of the regimens over the other and that these reasons could have affected Tan's study results. Because of this, the authors state that their study cannot say conclusively that abacavir and tenofovir are equivalent in terms of efficacy.

Other features of the Canadian study, however, were similar to ACTG 5202, and the Canadian study's results are similar to a different clinical trial, the HEAT study, which found that abacavir was equivalent to tenofovir, even in people with high viral loads. Therefore, the authors conclude: "These results support the use of either NRTI backbone in the initial therapy of ART-naïve patients, and would support continuing [abacavir/lamivudine] as a 'preferred' NRTI option."
