HIV Drug Abacavir Increased Heart Attack Risk by 95 Percent in Danish Study

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A study conducted in Denmark suggests abacavir (found in Ziagen, Epzicom and Trizivir) increases the risk of a heart attack by 95 percent—a risk that remains elevated even after the drug is stopped—according to a study published in the February edition of HIV Medicine and reported by aidsmap.

Abacavir was first found to be associated with an increased risk of heart attacks in the 33,000-patient Data Collection on Adverse Events of Anti-HIV Drugs (D:A:D) study. According to a report at the Conference on Retroviruses and Opportunistic Infections in February 2008 in Boston, abacavir increased the relative risk of a heart attack by 90 percent, despite the fact that the drug had never been known to contribute in any way to cardiovascular disease (CVD). More recently, the relative risk of a heart attack associated abacavir downgraded to 70 percent, now that more data regarding confounding factors—notably cholesterol and triglyceride levels—are available.

The D:A:D findings were echoed later that year in data from the Strategies for the Management of Antiretroviral Therapy (SMART) study, first reported at the XVII International AIDS Conference (IAC) in Mexico City. According to SMART, patients using abacavir were 4.3 times more likely to have a heart attack than those not using the drug. And an analysis of 54 clinical trials conducted by abacavir's manufacturer, ViiV Healthcare (then GlaxoSmithKline) concluded that heart attack and stroke rates were no higher among those using the med, which is classified as a nucleoside reserve transcriptase inhibitor.

Data indicating a neutral effect of abacavir on heart attack risk have also been reported. A study by the federally funded AIDS Clinical Trials Group (ACTG study A5001) evaluated more than 3,200 patients starting their first ARV regimen. It discovered a 2 percent increase in the risk of a heart attack among recent abacavir users—but this finding was not statistically significant.

The latest study, reported by Niels Obel, MD, of Copenhagen University Hospital and his colleagues, evaluated the impact of abacavir therapy and the risk of hospitalization because of heart attacks among 2,930 HIV-positive patients in Denmark. Not only did the study authors look for the incidence of heart attacks among the volunteers, but they also looked for the same confounding variables—such as age, gender, elevated blood lipid levels, high blood pressure and

the presence of other diseases known to be associated with CVD risk—that were included in more recent studies.

Of the 2,930 individuals in the cohort, aidsmap reports, 1,761 were treated with abacavir. A little over a third of these patients started HIV treatment with a regimen that included abacavir, and the remaining 66 percent of individuals switched to the drug at least two years after initiating antiretroviral therapy. A total of 67 heart attacks were observed. Of these, 36 occurred after treatment with abacavir was started.

Among those currently using the drug, the relative risk of a heart attack was 95 percent. Interestingly—and in contrast with the findings of D:A:D—the relative risk of a heart attacked remained high, around 137 percent, even after the drug was discontinued.

As the Danish researchers sum up: “We confirmed the finding of the D:A:D study of an increased risk of [heart attack] after initiation of abacavir therapy.”

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