

Blood Pressure Drug Decreases Diabetes Risk

Long-term study showed a 23% reduced chance of developing diabetes in patients taking valsartan compared with amlodipine.

REVIEWED BY KENNETH A. JAMERSON, MD

The blood pressure drug valsartan appears to protect against diabetes, especially in high-risk patients, according to new research presented at the American Society of Hypertension's 20th Annual Scientific Meeting and Exposition.

Valsartan (Diovan, Novartis), an angiotensin II receptor antagonist, was compared to the calcium antagonist amlodipine, in the VALUE (Valsartan Antihypertensive Long-Term Use Evaluation) trial. According to Kenneth A. Jamerson, MD, professor of internal medicine at the University of Michigan, patients assigned valsartan had a 23% lower risk of developing diabetes during the ≥ 4 years of the study. According to a University of Michigan news release, two drugs had previously been shown to be roughly equivalent in reducing the risk of myocardial infarction and stroke.

According to this latest in-depth analysis of data from the two groups of patients, the difference in diabetes onset risk appears to be attributable to valsartan, and not to other underlying factors. However, the researchers determined that certain risk factors made specific patients more likely to develop diabetes. The more of these risk factors a patient had, the more protective valsartan's effect.

The randomized trial involved 15,313 patients at 942 sites in 31 countries; 9,995 did not have diabetes at the beginning of the study. All patients were aged >50 years, were hypertensive and at high risk for having a cardiac event. By the end of ≥ 4 years of follow-up, 11.5% of the patients assigned valsartan had developed diabetes versus 14.5% of patients assigned amlodipine.

"These new results should help physicians as they select antihypertensive agents for their patients, especially for those at higher risk of developing diabetes," said Dr. Jamerson. "Since we know from other studies that other hypertension medications such as diuretics come with a higher risk of diabetes, this result is especially interesting."

High blood sugar, faster heart rate, high body mass index, the concurrent use of a diuretic and beta-blocker,

non-white race and younger age were all associated with a higher risk of developing diabetes in all VALUE patients. But after adjustment for these variables, patients who took valsartan had less of a chance of developing diabetes.

University of Medicine emeritus professor of internal medicine Stevo Julius, MD, chair of VALUE and Dr. Jamerson are both members of the University of Michigan Cardiovascular Center. They note that diabetes onset prevention was not a primary goal of the VALUE study, therefore more research is needed to confirm the finding. They also point out that this is the first study in which an angiotensin II receptor antagonist was pitted against a calcium-channel antagonist.

"We know many factors increase the risk of diabetes, but valsartan appears to be important in that it provides protection against diabetes," said Dr. Jamerson. "Many patients with hypertension are also obese and have other risk factors that predispose them to develop diabetes. This trial adds to the armamentarium that physicians can choose from when treating patients with high diabetes risk."

The researchers separated the VALUE trial participants who weren't diabetic at the start of the trial into three groups, depending on the number of diabetes-predicting factors they had. The patients in the highest-risk group were six times more likely than the lowest-risk group to develop diabetes during the trial period. But, among the patients in the highest-risk and second-highest-risk groups, the patients taking valsartan were significantly less likely to develop diabetes.

According to the researchers, this finding suggests valsartan has some effect on glucose metabolism. ■

Kenneth A. Jamerson, MD, is a professor of internal medicine, cardiology and hypertension, at the University of Michigan. He can be reached at jamerson@umich.edu.

Jamerson KA. VALUE (Valsartan Antihypertensive Long-Term Use Evaluation) trial. Late breaking clinical trials. Presented at the American Society of Hypertension's Twentieth Annual Scientific Meeting and Exposition. May 14-18, 2005. San Francisco.