

## Effects of direct renin inhibition on atherosclerotic biomarkers in patients with stable coronary artery disease and type 2 diabetes mellitus

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**Objectives:** To evaluate whether the direct renin inhibitor, aliskiren, has a more favorable effect compared to amlodipine on atherosclerotic biomarkers in patients with stable coronary artery disease and diabetes currently receiving standard secondary prevention therapy.

**Methods:** Thirty eight subjects were randomly assigned initially to either aliskiren (150 mg daily) or amlodipine (5 mg daily) for two weeks after which the dose of either medication was increased to its maximum daily dose for four additional weeks. Baseline and six week blood samples were analyzed for changes from baseline and between treatment groups for vascular and intracellular cell adhesion molecule (VCAM and ICAM), c-reactive protein (CRP), nitric oxide (NO), plasminogen activator inhibitor-1 (PAI-1), 8-isoprostane, and thiobarbituric acid reactive substances (TBARS).

**Results:** Thirty one patients completed the study. More of the drop outs occurred in subjects receiving aliskiren. Systolic blood pressure decreased in both treatment arms with no differences between groups being noted. PAI-1, NO, and CRP concentrations increased in both groups from baseline but changes from baseline or between groups were not significant. VCAM, ICAM, TBARS, and isoprostane concentrations decreased in each treatment arm from baseline but these changes were not significant and no differences between groups were noted.

**Conclusions:** Treatment with either aliskiren or amlodipine did not significantly alter surrogate biomarkers of atherosclerosis in patients with both diabetes and established cardiovascular disease already receiving appropriate secondary cardiovascular prevention therapy. The study is limited in its size and duration to see an effect.

### Biography

Brian K. Irons is an Associate Professor and Division Head-Ambulatory Care at the Texas Tech University Health Sciences Center School of Pharmacy. He has been on faculty there since 1999. He completed both a PGY-1 and PGY-2 residency after completing his BS and PharmD from the University of Wisconsin. Dr. Irons has over 35 publications most of which are in the area of management of type 2 diabetes mellitus. He is a Fellow with the American College of Clinical Pharmacy.

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