Statins Fail to Influence Central Hemodynamics

BY PATRICE WENDLING
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CHICAGO — Statin therapy does not significantly influence central aortic pressures or hemodynamics in patients with treated hypertension, Dr. Bryan Williams reported at the annual meeting of the American Society of Hypertension.

He presented data from the lipid-lowering arm of the Conduit Artery Function Evaluation (CAFE-LLA) study, a substudy of the Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT).

Overall, 891 patients were recruited from the statin arm of the ASCOT trial in which patients were treated with atorvastatin 10 mg/day or placebo. ASCOT was stopped early when it became clear that atorvastatin had benefits over placebo in reducing major cardiovascular events and stroke.

The CAFE-LLA investigators hypothesized that this benefit could arise from a favorable effect of statins on large-artery function. They used radial artery pulse-wave analysis to derive central aortic pressures and hemodynamic indexes on repeated visits over a 2.5-year follow-up with the same treatment regimen.

The patients' mean age was 63 years; 86% were men, and 85% were white. At baseline, average total cholesterol level was 210 mg/dL, LDL cholesterol 130 mg/dL, and HDL cholesterol 50 mg/dL.

Atorvastatin lowered the LDL cholesterol level by 32.5 mg/dL, compared with placebo. Time-averaged brachial BP was similar in people receiving atorvastatin or placebo (brachial systolic BP changed by 0.1 mm Hg and brachial pulse pressure changed by 0.02 mm Hg).

The drug had no influence on central aortic BP, compared with placebo (the change in aortic systolic BP was –0.5 mm Hg and the change in aortic pulse pressure was –0.4 mm Hg).

It also did not alter augmentation index or heart rate, compared with placebo, said Dr. Williams, professor of medicine, department of cardiovascular sciences, University of Leicester (England).

The atorvastatin given to 147 patients previously treated with placebo did not subsequently influence brachial or central systolic pressure after 1.4 years of follow-up.

"The benefits of atorvastatin in the ASCOT trial, in significantly reducing coronary heart disease and stroke in hypertensive patients, are not dependent on changes in central aortic pressures or pressure-grade reflections," he said. The results suggest that "statin effects cannot be reproduced by blood pressure–lowering agents, thereby supporting the use of these two strategies to reduce risk in high-risk hypertensives."

Dr. Williams has received research support from Pfizer and Merck. ■

Nightly Valsartan Is Better Than Daytime Dosing

CHICAGO — Bedtime dosing of valsartan is more efficient than morning dosing in controlling blood pressure and improving renal function in hypertensive patients with or without diabetes, Ramon Hermida, Ph.D., said at the annual meeting of the American Society of Hypertension.

He suggested this effect may be class related for angiotensin II receptor blockers (ARBs) and should be taken into account when treating patients with hypertension.

Dr. Hermida and his colleagues randomized 204 untreated hypertensive patients to receive valsartan 160 mg/day either upon awakening or at bedtime. Blood pressure was measured at 20-minute intervals from 7:00 a.m. to 11:00 p.m., and at 30-minute intervals at night for 48 hours before and after 12 weeks of therapy. Patients collected urine samples during the first 24 hours of monitoring. Their mean age was 52 years; 97 had type 2 diabetes mellitus.

Bedtime dosing with valsartan was significantly more efficient than morning dosing in reducing nocturnal BP in those with or without diabetes, said Dr. Hermida, of the University of Vigo (Spain). The diurnal/nocturnal BP ratio was unchanged after taking valsartan on awakening, but significantly increased by 5.3% when taken before bedtime. Urinary albumin excretion was significantly reduced by 23% from baseline in patients without diabetes and by 31% in those with diabetes only after bedtime administration, said Dr. Hermidat.

—Patrice Wendling

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