Sunday, March 14, 2010
8:00 a.m. EST

STUDY WARNS AGAINST AGGRESSIVE BLOOD PRESSURE LOWERING IN DIABETIC PATIENTS WITH CAD

Standard blood pressure control offers benefits but going too low can cause harm

Atlanta, GA – Tight blood pressure control in patients with diabetes and cardiovascular disease is no more effective in preventing heart attack, stroke or death than standard blood pressure treatment, and in some cases may actually be harmful, according to research presented today at the American College of Cardiology’s 59th annual scientific session. ACC.10 is the premier cardiovascular medical meeting, bringing together cardiologists and cardiovascular specialists to further advances in cardiovascular medicine.

The International Verapamil SR-Trandolapril (INVEST) Study showed that in patients with both diabetes and documented coronary artery disease (CAD), keeping systolic blood pressure (the top blood pressure reading) under 140 mmHg significantly cut cardiovascular risk. However, more intensive treatment to reduce systolic blood pressure to below 130 mmHg did not appear to offer any additional benefit.

“This current guidelines suggest ‘lower is better’ with regard to blood pressure,” said Rhonda M. Cooper-DeHoff, Pharm.D., M.S., an associate professor of pharmacy and medicine at the University of Florida, Gainesville. “Our data suggest that in patients with both diabetes and coronary artery disease, there is a blood pressure threshold below which cardiovascular risk increases.”

As many as two out of three adults with diabetes have high blood pressure. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) recommends blood pressure goals of less than 130/80 mmHg in people with diabetes. INVEST is the first study to critically evaluate the effects of systolic blood pressure lowering in patients with both diabetes and documented CAD.

For the study, INVEST randomly assigned 6,400 patients with diabetes and CAD to blood-pressure-lowering therapy based either on a calcium-channel blocker or a beta blocker, plus an angiotensin-converting-enzyme (ACE) inhibitor and/or a thiazide diuretic. The target was a blood pressure of less than 130/85 mmHg. For the analysis, patients were categorized according to the degree of blood pressure control actually achieved. Patients with a systolic blood pressure of 140 mmHg or higher—almost one-third of patients—were classified as Not Controlled. Those with a systolic blood pressure below 130 mmHg were classified as Tight Control and those with a systolic blood pressure in between (130 mmHg or greater, but under 140 mmHg) were classified as Usual Control.

During a follow-up period equivalent to more than 16,893 patient-years, researchers found that patients in the Not Controlled group had nearly a 50 percent higher combined risk of death, heart attack, or stroke when compared with the Usual Care group. However, those in the Tight Control group had a similar risk to those in the Usual Control group. Further analysis showed that lowering systolic blood pressure below 130 mmHg significantly increased the risk of all-cause death when compared to Usual Care, an increase
that became apparent about 30 months into the study and persisted for an additional five years of follow-up. When researchers then analyzed blood pressure in 5mmHg increments in the Tight Control group, they discovered that a systolic blood pressure below 115 mmHg was associated with increased mortality.

“Diabetic patients with CAD in whom blood pressure is not controlled have an increased risk for unfavorable cardiovascular outcomes, so the message to lower systolic blood pressure below 140 mmHg is still important,” Cooper-DeHoff said. “However, it is not necessary to lower systolic blood pressure below 130 mmHg to reduce that risk. Most importantly, reducing systolic blood pressure below 115 mmHg may be associated with increased mortality.”

Abbott Laboratories provided funding for INVEST. Dr. Cooper-DeHoff also received support from an NIH career development award.

Dr. Cooper-DeHoff will be available to the media on Sunday, March 14, at 9:45 a.m. - 10:45 a.m. in Room B201.

Dr. Cooper-DeHoff will present the study “Rethinking Lower BP Goals For Diabetics With Documented Coronary Artery Disease - Findings from the INternational VErapamil SR - Trandolapril STudy (INVEST)” on Sunday, March 14, at 8:00 a.m. – 9:30 a.m. in the Murphy Ballroom.

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The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular care through education, research, promotion, development and application of standards and guidelines – and to influence health care policy. ACC.10 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.