Adjust Treatment Goals In Hypertensive Seniors

In patients with coronary artery disease, pressure levels less than 120/80 mm Hg may be dangerous.

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ORLANDO — Current blood pressure categories should not serve as treatment goals for older patients with hypertension and coronary artery disease, based on a post hoc analysis of data collected from more than 22,000 patients.

Among patients with hypertension and documented coronary artery disease (CAD) and an average age of 66, those who maintained a blood pressure of less than 120/80 mm Hg had a significantly higher rate of death, myocardial infarction, or stroke, compared with patients who were maintained at a pressure of 120-139/80-89 mm Hg, Rhonda M. Cooper-DeHoff, Pharm.D., reported in a poster at a conference on cardiovascular disease epidemiology and prevention sponsored by the American Heart Association. Further analysis showed that systolic pressure played the key role, and that patients did best if their systolic pressure was kept at 120-139 mm Hg.

These findings are noteworthy because the current standard for treating hypertension in the United States, the Seventh Report of the Joint National Committee (JNC 7), labeled blood pressures in the range of 120-139/80-89 mm Hg "prehypertension" and said that patients with these pressures need lifestyle modifications to lower their pressure and prevent development of cardiovascular disease.

A major difference between the prehypertensive people described in JNC 7 and the patients in the new analysis is that the new study focused on patients with existing CAD who were treated with antihypertensive medications to reach their maintenance blood pressure. The JNC 7 guidelines apply to previously untreated people, most of whom would not have CAD.

"Our findings suggest that blood pressure reduction in elderly hypertensive CAD patients is important, but care should be taken to avoid excessive blood pressure lowering in this population," Dr. Cooper-DeHoff and her associates said in their poster.

Blood pressure that is less than 120/80 mm Hg in older patients with CAD may be dangerous because these patients have relatively stiff arteries and it may be hard to adequately perfuse important organs at lower blood pressures, Dr. Cooper-DeHoff said in an interview.

"The message isn't to not treat hypertension in these patients, but to use caution and not treat to very low levels. The idea that the lower the pressure the better may not apply to these patients," said Dr. Cooper-DeHoff, associate director of the cardiovascular clinical trial program at the University of Florida, Gainesville.

Her analysis used data collected in the International Verapamil-Trandolapril Study (INVEST), which was designed to compare two antihypertensive strategies in patients with CAD. The main finding from the study was that a blood pressure–lowering regimen based on using verapamil SR and trandolapril was as effective as a regimen based on using atenolol and hydrochlorothiazide (JAMA 2003; 290:2805-13). The post hoc analysis by Dr. Cooper-DeHoff and her associates focused on the outcomes of patients based on their achieved pressure with treatment rather than on their outcomes based on what treatment they received.

The analysis included data on 22,576 patients who were followed for an average of 2.7 years after starting their antihypertensive treatment. The patients were 50-90 years old, with an average age of 66. All participants had documented CAD. The primary outcomes tallied were death or nonfatal myocardial infarction or stroke.

One analytic approach divided the patients into three groups: about 1,500 patients who achieved an average pressure of less than 120/80 mm Hg, about 13,600 patients who reached a mean pressure of 120-139/80-89 mm Hg, and about 7,500 whose average pressure on treatment remained at or above 140/90 mm Hg.

In an analysis that adjusted for demographic and clinical differences at baseline, the patients with the lowest pressures had a 44% increased risk of a primary outcome, compared with patients in the middle group, and those with the highest pressures had a 53% increased risk of a primary outcome, compared with patients in the middle group. Both differences were statistically significant. ■