Optimal Systolic Blood Pressure Goal in Persons Aged 60 Years and Older

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EDITORIAL

The American College of Cardiology Foundation/American Heart Association 2011 expert consensus document on hypertension in the elderly developed in collaboration with the American Academy of Neurology, the American Geriatrics Society, the American Society for Preventive Cardiology, the American Society of Hypertension, the American Society of Nephrology, the Association of Black Cardiologists, and the European Society of Hypertension recommended that the systolic blood pressure be lowered to less than 140 mm Hg in persons aged 60-79 years and to 140 to 145 mm Hg if tolerated in adults aged 80 years and older [1]. I strongly support these guidelines based on clinical trial data, especially from the Systolic Hypertension in the Elderly trial [2-4] and from the Hypertension in the Very Elderly trial [5].

The European Society of Hypertension/European Society of Cardiology 2013 guidelines for management of hypertension recommend lowering the systolic blood pressure to less than 140 mm Hg in persons aged 60 to 79 years [6]. In persons aged 80 years and older with a systolic blood pressure of 160 mm Hg or higher, the systolic blood pressure should be lowered to between 140-150 mm Hg provided they are in good physical and mental conditions [6].

The 2013 Eighth Joint National Committee (JNC 8) guidelines for management of hypertension recommend lowering the systolic blood pressure in persons aged 60 years or older to less than 150 mm Hg if they do not have diabetes mellitus or chronic kidney disease and to less than 140 mm Hg if they have diabetes mellitus or chronic kidney disease [7]. I concur with the minority view from JNC 8 which recommends that the systolic blood pressure goal in persons aged 60 to 79 years with hypertension without diabetes mellitus or chronic kidney disease should be less than 140 mm Hg [8].

The 2013 Canadian Hypertension Education Program guidelines [9], the 2011 United Kingdom guidelines [10], the 2014 American Society of Hypertension/International Society of Hypertension guidelines [11], the Association of Black Cardiologists [12], and the Working Group on Women’s Cardiovascular Health [12] also support a systolic blood pressure goal of less than 140 mm Hg in persons aged 60 to 79 years and of less than 150 mm Hg in persons aged 80 years and older. Recent data from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study also support a systolic blood pressure goal of less than 140 mm Hg in persons older than 75 years [13].

Older persons are currently being undertreated for hypertension [1]. If the JNC 8 panel recommendations are used, 6 million adults in the United States aged 60 years and older would be ineligible for treatment with antihypertensive drugs, and treatment intensity would be decreased for an additional 13.5 million older persons [14], leading to increased incidences of coronary events, stroke, heart failure, cardiovascular mortality, and other adverse events associated with inadequate control of hypertension. The Association of Black Cardiologists is concerned that the JNC 8 recommendations will endanger more than 36 million American aged 60 years and older with hypertension, with a disproportionate negative effect on African-Americans who are at greater risk for coronary heart disease, stroke, chronic kidney disease, and heart failure [12]. The Working Group on Women’s Health also point out that the older hypertensive population is primarily women, and that older women generally have inadequate control of hypertension, and that approximately 40% of older women with poor blood pressure control are African-American women, who have the highest risks for stroke, heart failure, and chronic kidney disease [12].

Among 8,354 patients aged ≥60 years with coronary artery disease in the International VErapamil SR Trandolapril (INVEST) study, a baseline systolic blood pressure of ≥150 mm Hg, and 22,308 patient years of follow-up, 57% had a systolic blood pressure lower than 140 mm Hg, 21% had a systolic blood pressure of 140 to 149 mm Hg, and 22% had a systolic blood pressure of ≥150 mm Hg [15]. The primary outcome of all-cause mortality, nonfatal myocardial infarction, or nonfatal stroke occurred in 9.36% of patients with a systolic blood pressure below 140 mm Hg, in 12.71% of patients with a systolic blood pressure of 140-149 mm Hg, and in 21.3% of patients with a systolic blood pressure ≥150 mm Hg [15]. Using propensity score analyses, compared with a systolic blood pressure below 140 mm Hg, a systolic blood pressure of 140-149 mm Hg increased cardiovascular mortality 34% (p<0.001), total stroke 89% (p=0.002), and nonfatal stroke 70% (p=0.03) [15]. Compared with a systolic blood pressure below 140 mm Hg, a systolic blood pressure of ≥150 mm Hg increased the primary

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