Begin Treating Hypertension Sooner in Blacks

BY DAN HURLEY

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF HYPERTENSION

NEW YORK — Hypertension treatment for African Americans should begin at a blood pressure of 135/85 mm Hg, rather than the previously recommended 140/90 mm, according to forthcoming guidelines from the International Society on Hypertension in Blacks.

In addition, the guidelines now favor chlorthalidone as the preferred thiazide-like diuretic (not hydrochlorothiazide), with the initial dose at 25 mg per day, not 12 mg per day as previously recommended.

Perhaps most significantly, the guidelines call for the target BP levels to be seen by physicians as ceilings, not floors.

"We encourage you to drive the blood pressures significantly under the targets," said Dr. John M. Flack, chairman of the working group that developed the International Society on Hypertension in Blacks (ISHIB) consensus statement on the management of hypertension in African Americans at the meeting. "If you drive just to the target, the patient will oscillate above and below it."

Current blood pressure control rates in African Americans remain poor, said Dr. Flack, professor of medicine and physiology and chairman of the department of internal medicine at Wayne State University, Detroit, as well as principal investigator of the university's Center for Urban and African American Health.

"We've had a slight improvement in control rates over the past decade, so we're trending in the right direction," he said. But, he noted, recent studies have found that only 29.9% of non-Hispanic black men have their hypertension properly controlled, and 36.0% of black women.

What's more, death rates from hypertension remain more than double that of whites, he noted, accounting for 30% of deaths in hypertensive African American men, and 20% of hypertensive African American women.

The new guidelines stratify risk into primary and secondary prevention. Primary prevention applies to patients with a BP of at least 135/85 mm Hg without target-organ damage, or cardiovascular disease—even if the CVD is preclinical. Secondary prevention applies to those with BP of at least 130/80 and target-organ injury or any degree of cardiovascular disease.

By those risk stratums, the target BP level for primary prevention should be 135/85 mm Hg, or 130/80 mm Hg for secondary prevention.

Even if BP is at 115/75 mm Hg, comprehensive lifestyle modifications should be recommended: weight loss if overweight, dietary change (low fat, low sodium, high potassium, adequate calcium), a limit on alcohol, regular physical activity, and avoiding or stopping smoking.

The key therapeutic recommendations for primary prevention in patients with a BP less than 145/90 mm Hg are optional comprehensive lifestyle modifications for up to 3 months, and then antihypertensive drugs. Preferred agents are a thiazide diuretic or calcium channel blocker, with a RAS blocker as an alternative, and a beta-blocker as optional.

In primary prevention where the patient's blood pressure is greater than 15/10 above goal, two-drug therapy should be initiated, with the preferred combination being either a calcium channel blocker and RAS blocker or a thiazide and RAS blocker. The alternative would be a thiazide and beta-blocker or thiazide and calcium channel blocker. The optional combination would be a thiazide and aldosterone antagonist.

The key therapeutic recommendations for secondary prevention in which the patient's blood pressure is greater than 15/10 above goal would be combination therapy using drugs with compelling indications. If the patient's BP is less than 15/10 above goal, a single agent with a compelling indication would be used, with a diuretic or calcium channel blocker preferred; a RAS blocker as an alternative; and a beta-blocker as optional.

"There was a lot of debate about which drug lowers blood pressure more or less," Dr. Flack said. But, he added, "Most African Americans are not going to hit target with a single drug, so the argument over which is best is largely irrelevant."

The central point, he said, is that physicians need to work harder to bring their African Americans' BP levels below targets. "If these guidelines are implemented," he said, "they will improve outcomes for our African American patients."

Dr. Flack has received grants and research support from Merck & Co., Novartis, Pfizer Inc., GlaxoSmithKline, Astra Merck Inc., Astra Zeneca, Boehringer Mannheim Pharmaceuticals, Cardiodynamics, and Daiichi Sankyo Co. He has been a consultant to Merck, GlaxoSmithKline, Bristol-Myers Squibb, Novartis, CVRx Inc, and Myogen Inc. ■

Kaiser Members' Acute MI Rates Fell 24% From 1999 to 2008

VITALS

Major Finding: The age- and sex-adjusted incidence of acute MI decreased by 24% between 1999 and 2008.

Data Source: A study of 46,086 Kaiser Permanente Northern California members aged 30 years and older who were hospitalized with a primary discharge diagnosis of acute MI.

Disclosures: The study was supported by funding from the Permanente Medical Group and by a Schering-Plough Future Leaders in Cardiovascular Medical Research grant. Three of the study authors are employed by Permanente Medical Group.

BY DOUG BRUNK

FROM THE NEW ENGLAND JOURNAL OF MEDICINE

The incidence of myocardial infarction declined by 24% between 1999 and 2008, and the decline was most significant among those with ST-segment elevation myocardial infarction, according to findings from a large community-based population study.

In addition, 30-day mortality rates improved, driven mostly by declining case fatality rates among patients with non–ST-segment elevation myocardial infarction (non-STEMI).

Researchers identified 46,086 members of Kaiser Permanente Northern California aged 30 years and older who were hospitalized between 1999 and 2008 with a primary discharge diagnosis of acute MI. The 46,086 hospitalizations represented 18,691,131 person-years of follow-up. Kaiser Permanente Northern California is a large integrated health care delivery system with more than 3 million members, noted the researchers, led by Dr. Robert W. Yeh of the department of medicine at Massachusetts General Hospital, Boston.

The researchers used ICD-9-CM codes to classify MI hospitalizations as STEMI or non-STEMI and to calculate age- and sex-adjusted incidence rates. They used administrative databases, state death data, and Social Security Administration data to determine 30-day mortality, and also identified patient characteristics, outpatient medications, and levels of cardiac biomarkers during hospitalization (N. Engl. J. Med. 2010;362:2155-65).

"Previous studies of the incidence of myocardial infarction and case fatality rates have often focused on selected subgroups (e.g., the elderly) in populations with limited diversity with respect to race and ethnic group, age, sex, and coexisting conditions, and most have not examined ST-segment elevation [MI] separately, although the management and outcomes of these entities differ markedly," Dr. Yeh and his associates wrote. "The increased use of highly sensitive cardiac biomarkers, particularly troponin, over time might also have contributed to both an artifactually higher incidence of myocardial infarction and a lower level of severity among diagnosed cases."

After adjustment for age and sex, the overall incidence of MI rose from 274 cases per 100,000 person-years in 1999 to 287 cases per 100,000 person-years in 2000, then fell each year thereafter, reaching 208 per 100,000 person-years in 2008. This represented a significant 24% decrease over the study period. In addition, 30-day mortality after acute MI was significantly lower in 2008 than in 1999 (adjusted odds ratio, 0.76).

The incidence of age- and sex-adjusted STEMI decreased each year, from 133 per 100,000 person-years in 1999 to 50 per 100,000 person-years in 2008, a decline of 62%. However, the incidence of non-STEMI increased from 155 cases per 100,000 person-years in 1999 to 202 cases per 100,000 person-years in 2004, the year that use of troponin testing stabilized, and decreased thereafter.

Adjusted 30-day mortality decreased significantly from 1999 to 2008 among patients with non-STEMI (OR, 0.82) but did not change significantly among those with STEMI (OR, 0.93).

The researchers said that the declining incidence of MI in the study population can be attributed at least in part to "substantial improvements in primary-prevention efforts" implemented at Kaiser. The decline occurred "despite the increased sensitivity of new biomarkers for the diagnosis of myocardial infarction" and the increasing prevalence of obesity and diabetes. The increased use of troponin testing would be expected to increase the incidence of MI, so "the observed decreases in myocardial infarction since 2000 are even more striking," Dr. Yeh and his associates wrote.

In an editorial, Jeremiah R. Brown, Ph.D., and Gerald T. O'Connor, Ph.D., Sc.D., of the Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, N.H., noted that U.S. clinicians are succeeding in preventing coronary heart disease by "reducing the burden of modifiable risk factors, such as smoking, hypertension, and high cholesterol levels," but diabetes and obesity are becoming more prevalent (N. Engl. J. Med. 2010;362:2150-3).

"Despite the availability of statins and other pharmacologic agents … to modify the risk factors for coronary heart disease," they continued, "the rate of improvement has slowed down or stopped … As a nation, we are not making prevention a priority in our hospitals, clinics, schools, or communities."

Dr. Yeh and his associates acknowledged certain limitations of their study, including the fact that "the true effect of changes in diagnostic sensitivity with changing biomarker use cannot be comprehensively quantified. However, the expected bias would be an overestimation of the incidence of myocardial infarction in later years. Thus, actual decreases in the incidence of myocardial infarction since 2000 may, in fact, be greater than we observed."

They also noted that the study results "may not be fully generalizable to other health care settings," considering Kaiser's integrated model of health care delivery. ■