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 chair 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 GVD is preclinical. Secondary prevention applies to those with BP of at least 130/80 and target-or- gan injury or any degree of cardiovas- cular disease.

By those risk strata, the target BP level for primary prevention should be 135/88 mm Hg, or 130/80 mm Hg for secondary prevention.

Even if BP is at an 115/75 mm Hg, comprehensive lifestyle modifications should be recommended: weight loss if overweight, dietary change (low-fat, low-sodium, high-potassium, adequate carbohydrate), 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 option- al: a Beta-blocker as 1st-line therapy; 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 combination 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 indica- tions. 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, as a RAS blocker as 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 argu- ment over which is best is largely ir- relevant.”

The central point, he said, is that physi- cians need to work harder to bring their African Americans’ BP levels below tar- gets. “If these guidelines are imple- mented,” he said, “they will improve outcomes for our African American pa- tients.”

Dr. Flack has received grants and research support from Merck & Co., No- varis, Pfizer Inc., GlaxoSmithKline, Ast- tra Merck Inc., Astra Zeneca, Boehringer Mannheim Pharmaceuticals, Cardiody- namics, and Daichi Sankyo Co. He has been a consultant to Merck, Glaxo- SmithKline, Bristol-Myers Squibb, No- varis, CVIRs Inc, and Myogen Inc.

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

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 popula- tion study.

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

Researchers identified 46,086 members of Kaiser Permanente Northern California aged 30 years and older who were hospital- ized between 1999 and 2008 with a primary discharge diag- nose of acute MI. The 46,086 hospitalizations represented 18,691,131 person-years of follow-up. Kaiser Permanente Northern California is a large in- cluded health care delivery system with more than 3 mil- lion members, noted the re- searchers, led by Dr. Robert W. Yeh of the department of med- icine at Massachusetts General Hospital, Boston.

The researchers used ICD-9- CM codes to classify MI hospi- talizations as STEMI or non-STEMI and to calculate age- and sex-adjusted incidence rates. They used administrative data- bases, pharmacy data, and Social Security Administration data to determine 30-day mortality, and also identified patient character- istics, outpatient medications, and levels of cardiac biomarkers during hospitalization (N. Engl. J. Med. 2010;362:2155–67).

"Previous studies of the inci- dence of myocardial infarction and case fatality rates have often focused on selected subgroups (e.g., the elderly) in populations with limited diversity with re- spect to race and ethnic group, age, sex, and coexisting condi- tions, and most have not exam- ined ST-segment elevation [MI] separately, although the man- agement 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 ar- tificially higher incidence of myocardial infarction and a lower level of severity among diag- nosed 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 cas- es per 100,000 person-years in 2000, then fell each year there- after, reaching 208 per 100,000 person-years in 2008. This rep- resented a significant 24% de- cline in the rate of MI incidence, addition, 30-day mortality after acute MI was significantly low- er than in 2008 (in adjusted 0.76).

The incidence of age- and sex- adjusted STEMI decreased from 153 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 in- creased from 137 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 de- creased 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 attrib- uted at least in part to “substan- tial improvements in primary- prevention efforts” implemented at Kaiser. The decline occurred “despite the increased sensitivity of new biomarkers for the diag- nosis of myocardial infarction” and the increasing prevalence of obesity and diabetes. The in- creased use of troponin testing would be expected to increase the incidence of MI, so “the ob- served decrease in the incidence of MI after the advent of tro- ponin testing is therefore likely due to additional factors.”

In an editorial, Jeremiah R. Brown, Ph.D., and Gerald T. O’Connor, M.D., of the Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, N.H., noted that U.S. clinicians are succeeding in pre-venting coronary heart disease by “reducing the burden of modifiable risk factors, such as smoking, hypertension, and high cholesterol levels,” but di- abetes and obesity are becom- ing more prevalent (N. Engl. J. Med. 2010;362:2150–3).

In the context of the utility of statins and other pharmacolog- ical agents to modify the risk factors for coronary heart dis- ease, 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 in- farction. “Despite the large ac- tual 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.