

Management of High Blood Pressure in African Americans and the 2010 ISHIB Consensus Statement: Meeting an Unmet Need

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Since the March 2003 release of “Management of High Blood Pressure in African Americans: Consensus Statement of the Hypertension in African Americans Working Group of the International Society on Hypertension in Blacks (ISHIB),” primary care clinicians, hypertension specialists, and public health officials have anxiously awaited new ISHIB guidelines.¹ In general, guidelines are systematically developed statements to assist clinicians and to inform the public in order to gain support for appropriate health care for specific clinical situations. The 2003 ISHIB consensus statement promulgated recommendations, at times despite the absence of specific, clear-cut, randomized, controlled trial evidence in blacks. Nevertheless, a 2010 ISHIB statement is needed, based on the availability of new data, even if limited, since action is required now to curtail hypertension-related target organ damage and excess deaths in African Americans.

Blacks in the United States have one of the highest rates of hypertension in the world and, in comparison with American whites, have earlier onset,

poorer control, increased target organ damage, and more prevalent coexisting conditions.^{2,3} These include type 2 diabetes, left ventricular hypertrophy, heart failure morbidity and mortality, fatal and non-fatal stroke, coronary heart disease mortality, and end-stage renal disease.^{2,3} Inadequate control of blood pressure (BP) is not unique to African Americans. In fact, Mexican Americans, probably because of low socioeconomic status (SES) and limited health care access, have the lowest rates of hypertension control among major US racial/ethnic groups.²

Therefore, rather than unique genetics, it is more likely that multiple factors explain the excess hypertension-related morbidity and mortality in African Americans, including low SES, adverse lifestyle and dietary patterns, and limited access to appropriately trained, certified providers.³ Since the original 2003 ISHIB report, data from the National Health and Nutrition Examination Survey (NHANES) note some improvement in the control rates for African Americans.² With increasing obesity, diabetes, and chronic kidney disease in all populations, and especially in African Americans, a 2010 ISHIB statement will provide up-to-date, expert insight into prevention, diagnosis, risk assessment, and clinical management of hypertension in blacks.

Each patient, regardless of self-identified race or ethnicity, is an individual with unique physiologic and environmental characteristics. Race, a social construct with no true scientific meaning, is used by historians, census takers, politicians, social scientists, and the general public without any specific assessment of genetic or biologic variance.⁴

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Appropriately, the ISHIB authors may note that despite an exceedingly high death rate in US blacks, practitioners should diagnose and treat each patient as an individual and avoid blanket generalizations regarding preferred medications or targets for African Americans.⁵

While a new ISHIB report can be criticized because of its failure to reject studies in which African Americans were excluded or not represented adequately, the harsh reality is that, in many cases, it is not possible to draw rigorous, evidence-based conclusions on the benefit or harm of specific antihypertensive regimens in blacks. Therefore, the working group, when indicated, will extrapolate results from major randomized trials, including those in which African Americans are underrepresented or absent, and an excellent chart of cardiovascular (CV) and renal outcome studies by race and drug treatment is included.

Globally, including some European populations and urban areas in continental Africa, high hypertension prevalence and severity have been noted, related to westernization, urbanization, increased sodium intake, low potassium intake, obesity, physical inactivity, and limited early pharmacotherapy.⁶ Being “black in America” reflects nonphysiologic factors that may impact poor BP control, including high levels of psychosocial stress, socioeconomic disadvantaged status, an inability to afford medication, and an increasing degree of nonadherence related to diminished health literacy, often combined with limited patient education and cultural competency by providers.⁴ Therefore, it is laudable that the 2010 ISHIB report will address care of indigent patients with hypertension and the social determinants of health, including educational attainment, health insurance status, and stress.

The ISHIB report similarly may discuss African American nonbiomedical beliefs, including nonacceptance of hypertension as a lifelong condition, usually mandating long-term antihypertensive medications, even without symptoms. Hence, the ISHIB group recognizes adverse patient-provider interactions that affect adherence and increase mistrust in the health care system by some African Americans. In addition, pathophysiologic considerations may be described in the document, but it is noted that racial/ethnic differences in metabolism, neurohormonal pathways, and hemodynamics often are greater within racial/ethnic groups versus across racial/ethnic groups.

The ISHIB working group is uniquely positioned to address controversial issues related to the renin-angiotensin system (RAS) and hypertension in

blacks and the appropriate use of RAS-blocking agents. The proposed 2010 ISHIB statement will not resolve the debate. However, RAS-blocking agents are listed as an early alternative to the preferred diuretics or calcium channel blockers (CCBs) as first line for primary prevention in patients without definite comorbid conditions, such as heart failure or chronic kidney disease.⁷ On the other hand, in high risk patients in the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT), lisinopril in the absence of diuretics or CCBs offered no CV outcome advantages over chlorthalidone, including less BP lowering, and significantly higher rates of stroke, heart failure, and coronary heart disease events in blacks. Nevertheless, in view of the high comorbidity, data support RAS-blocking agents in blacks as an alternative to preferred diuretics and CCBs for primary prevention as initial therapy and in the secondary prevention of heart failure and kidney disease.

In addition, blacks on average have less BP-lowering to monotherapy with angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs) than in whites.³ However, most trials do not control for high sodium intake or obesity, and it is known that dietary salt-induced suppression of renin production affects the ability of RAS-blocking medications to perform optimally. Furthermore, the ISHIB statement should note that salt sensitivity, combined with increased dietary sodium in potassium-deficient African Americans, may lead to renal vasoconstriction and increased BP.

Despite the predominance of primary or essential hypertension, it is important to not overlook secondary or identifiable forms of hypertension in African Americans, which are not uncommon. The ISHIB paper should highlight 3 secondary forms that may be considered more likely in African Americans: primary aldosteronism, critical renal artery stenosis, and obstructive sleep apnea.

Furthermore, the ISHIB guidelines may recommend the 10-year coronary heart disease Framingham absolute risk score in the decision-making process of when and how aggressively to treat patients. Although from a predominantly white population, Framingham risk is widely available, relatively easy to use, portable, and translated to other populations.

For hypertensive black patients, who often have long standing, poorly controlled BP, clinicians must assess target organ damage, especially high rates of renal and cardiac disease. The ISHIB guidelines should attempt to provide a logical structure and rational, tiered, therapeutic choices to guide clinical

decision making while avoiding being overly prescriptive, and a new recommendation of the 2010 ISHIB document may separate potential patient groups into 2 risk strata.⁵ The first group is primary prevention: BP \geq 135/85 mm Hg without target organ damage, preclinical CV disease, or CV disease and goal $<$ 135/85 mm Hg. The second group is secondary prevention: BP \geq 125/80 mm Hg, target organ damage, preclinical CV disease, and/or the presence of CV disease and goal BP $<$ 120/85 mm Hg, usually requiring multiple hypertensive agents. For primary prevention, lower BP targets, especially for persons with prediabetes or diabetes, should be recommended with caution. A key study likely to provide data in this area, Action to Control Cardiovascular Risk in Diabetes (ACCORD), will publish its results soon.

First-step combination therapy was suggested by ISHIB for systolic BP greater than 15 mm Hg and/or diastolic BP 10 mm Hg above goal.¹ However, in a unique and controversial position, the ISHIB treatment algorithm may list on equal footing a CCB/RAS blocker combination preferred or a diuretic/RAS blocker regimen for high-risk, older patients. The Avoiding Cardiovascular Events through Combination Therapy in Patients Living with Systolic Hypertension (ACCOMPLISH) trial included a sizable African American population (1416 of 11,506 participants) and, although final peer-reviewed results of the black cohort have not been reported, CCB/ACEI as a first-step therapy, improved CV disease outcomes compared to a combination of diuretic/ACEI.⁸ It should be noted, some researchers consider the 12.5 mg to 25 mg hydrochlorothiazide used in ACCOMPLISH less than ideal for CV protection.

As a necessary clinical tool, tables in the ISHIB consensus statement may list beneficial drug combinations versus ones that may lead to complications and adverse affects, including ACEI + ARB, β -blockers + ACEI, β -blocker + nondihydropyridine CCB, β -blockers + central agonist, and α -blocker + central agonist.

In the final analysis, the ISHIB recommendations should not be fixed rules that must be followed without reflection, but concepts that hopefully enhance responsible clinical judgment on the management of black patients with hypertension. A new consensus document from a panel of experts, chosen for their clinical experience and research acumen, would be a welcomed addition to the approach to hypertension in blacks for 2010 and beyond. It will greatly assist the efforts of clinicians, physicians, nurses, and other health professionals; it should provide guidance to managed care organizations and others with the responsibility to judiciously allocate health care resources.

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