Controlling Hypertensive Disease and Its Complications Among Black Americans

Current Challenges

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Although cardiovascular disease is still the primary cause of death in the United States, mortality rates have declined markedly since the mid-1960s. The large decreases in death rates from both coronary heart disease (CHD) and stroke, and consequently in mortality from all causes have included all strata of the adult population of the United States experiencing the cardiovascular disease (CVD) epidemic. The decline has occurred among blacks and whites, women and men, middle-aged and older people, and people of varied economic levels from all areas of the country. However, the decline has not been equally great among all strata. Five reports show that the decline in CHD rates is less for less educated and affluent persons compared with those of higher socioeconomic status.1-6 Also, the rate of decline in CHD mortality slowed for black men and women in 1976-1985 compared with 1968-1975, an unfavorable change not recorded for white men.7 US mortality statistics for 1986 show that, for the second year in a row, the black population experienced a decrease in life expectancy in contrast to an increase for the white population.8 This was a reversal of the previously favorable trend for blacks from 1970 on. In 1986, life expectancy at birth for blacks was 6 years less than for whites. For young and middle-aged adults, the differential was nearly as great.9 Despite the decline in CVD mortality, a key factor continues to be higher death rates for blacks from cardiovascular disease. In particular, death rates from cerebrovascular disease and hypertensive disease per se continue to be higher in blacks than whites. For both these causes of death, high blood pressure (HBP) is the overwhelming risk factor.

These mortality data reflect two well-known facts: first, HBP, particularly severe hypertension, remains much more prevalent in blacks than whites. Second, despite the great progress in the last 15 years in detection, evaluation, treatment, and normalization of hypertension, the prevalence of uncontrolled HBP remains high, particularly among persons of lower socioeconomic level (both black and white), where higher rates of HBP prevail.10,11

It is against the background of these challenges to US public health, preventive medicine, and medical care that the findings of Ooi and colleagues12 in this issue of Hypertension are of special importance. They report long-term data from a joint union/management-sponsored worksite treatment program in New York City for employed people with HBP. A total of 1,807 black and 2,962 white patients were seen from 1973-1985, with a median follow-up of 42 months. The most relevant findings are: achievement of similar blood pressure declines in both black and white participants treated for HBP and CVD incidence rates no higher, and possibly even lower, in blacks compared with whites.

As to the first of these, the prepaid program, which was part of a health benefits package for members of participating unions, used a systematic stepped-care approach to hypertension treatment, with care given at convenient locations. For blacks, blood pressure was lowered from 154/98 at baseline to 139/89 mm Hg at last revisit; for whites, from 155/94 to 139/86 mm Hg (i.e., reductions of 15/9 and 16/8 mm Hg). These similar accomplishments in blacks and whites with systematic stepped-care treatment based on administration of a thiazide-type diuretic as the initial medication, were also found in the Hypertension Detection and Follow-up Program (HDFP) and the Multiple Risk Factor Intervention Trial (MRFIT) in blacks and whites with use of similar intensive stepped-care therapy.13-15 These parallel data indicate that a “classical” diuretic-based stepped-care regimen is effective for the normalization of HBP in both blacks and whites. There is no evidence that any other intervention is superior, unless it is starting stepped care with low dose drug treatment combined with counseling to reduce obesity, high sodium intake, and excessive alcohol use.16 Whatever the actual facts are about differences in response to various antihypertensive drugs and the possible mechanisms in both black and white patients (complex issues beyond the scope of this editorial), the
practical and decisive truth is that when proper therapeutic resources are brought to bear, stepped care enables equally effective long-term control of HBP in both blacks and whites.

As to the second important set of findings reported by Ooi et al.\textsuperscript{12}—that all-cause mortality rate and incidence rates of stroke and myocardial infarction are lower in blacks than whites—a note of caution is in order. The black cohort was of lower mean age than the white group and had a lower proportion of men, both factors tending to result in lower incidence and mortality rates. In addition, the data as given in Table 1 are not stipulated to be age and sex adjusted.\textsuperscript{12} On the other hand, higher percentages of the black group had an abnormal electrocardiogram and specifically electrocardiographic abnormalities indicative of left ventricular hypertrophy at entry, and were of lower socioeconomic status than the whites, all traits repeatedly shown to be associated with increased risk of morbidity and mortality. With cross-classification of the overall cohort by age, sex, and race, incidence rates of major CVD events were similar for blacks and whites in three of the four demographic groups (their Figure 2).\textsuperscript{12} For men over 55 years of age, the rate was actually lower in blacks than in whites, based on a lower rate of myocardial infarction. (Presumably the dichotomy at age 55 yielded similar mean ages for blacks and whites in each of the four comparisons, although these mean ages are not described.) It seems reasonable to infer that the age and sex stratified comparisons indicate CVD rates for blacks that were no higher than for whites. This would appear to be a signal achievement of this vigorously sustained hypertension treatment program. It is in keeping with findings from the epidemiological analysis on 300,000+ MRFIT primary participants. In that study, the logistic coefficients for the relation of diastolic pressure to 5-year mortality from all causes, CVD mortality, and CHD mortality (but not stroke mortality) were similar for blacks and whites.\textsuperscript{17}

The CVD incidence data from the New York worksite program are also in agreement with two important findings from the HDFP trial. First, for the almost 11,000 men and women in that trial, race was not significantly related to 5-year mortality (the primary end point) in multifactorial analysis.\textsuperscript{18} Second, for HDFP participants with lower level of education, a majority of them black, the intensive stepped-care treatment program resulted in a 5-year mortality rate that was 23% lower than that of the referred care group.\textsuperscript{19} This favorable outcome prevailed for both blacks and whites. On the other hand, for stepped-care blacks with a lower level of education, the 5-year mortality rate was higher than for more educated blacks in that group. Thus, some but not all, of the negative consequences of race and educational background were overcome by the intensive treatment program. Similarly, in the New York worksite program, younger blacks of lower socioeconomic level fared less well than whites in CVD and all-cause mortality, as reflected in years of potential life lost per 1,000 persons before age 65.\textsuperscript{12}

In summary, intensive sustained stepped-care treatment programs for hypertensive blacks, including those of lower socioeconomic status, are capable of markedly reducing and perhaps eliminating the unfavorable prognosis of blacks compared with whites with HBP. Thus, the differential unfavorable to blacks is not primarily a consequence of inevitable inborn predispositions.

Much remains to be done among blacks in the general population to realize this potential. As the data on coronary mortality and life expectancy trends indicate, in recent years progress has apparently slowed or even ceased and may even be reversing. Data are available showing retrogression in control of HBP as a consequence of massive cutbacks in the Medicaid program.\textsuperscript{20} The achievements of Ooi et al.\textsuperscript{12} were a product of a labor management-sponsored, prepaid health insurance program. But on the national level, 44% of blacks and 20% of whites have no private health insurance,\textsuperscript{21} and among Americans age 65 and above, 12% of blacks and 4% of whites have no health care coverage.

Clearly, major socioeconomic barriers and inequalities must be overcome to realize the principle that access to health care is a right for all. This is essential to the potential for hypertension control shown by the trials in both black and white populations. This is a matter of national priority and calls for urgent resolution at the national public policy level.

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