

Letter to the Editor

The issue of African ancestry in Caribbean hispanics and salt sensitivity of blood pressure

We read with great interest the review article on salt-sensitivity of blood pressure by Richardson et al.¹ In it, the authors graciously quote some work we conducted years ago studying responses to antihypertensive agents in a large group of Hispanic patients of Caribbean origin. These subjects exhibited a pattern of response to drugs not very different from that in non-Hispanic Blacks.² Richardson et al speculate (as we did at that time) that this similarity in responses to therapy between the two groups might be caused by admixture of an African genetic pool in the Caribbean population, owing to the history of colonization and slavery in the region. We tried to address this by assessing ancestral maternal origin (mitochondrial DNA haplotypes) in 50 essential hypertensive and 48 normotensive Caribbean Hispanic subjects.³ A specific marker for sub-Saharan Africans was present in 32% of the subjects, and its distribution was consistent with the demographics of Caribbean countries (Dominican Republic 54% vs. Puerto Rico 22%). However, average plasma renin activity was not different between subjects with or without the marker, and the prevalence of the marker was not different between the hypertensive subjects classified (with a nomogram relating plasma renin activity to urinary sodium excretion) as normal- or low-renin hypertension. These data suggest that African ancestry is not a major determinant of the pattern of the hypertension of Caribbean Hispanics, since it was observed in subjects with African, Native American, or European mitochondrial DNA haplotypes. Hispanic subjects constitute an ethnic group defined

by a series of characteristics (geographical, linguistic, and cultural) without a strong biological or genetic substrate. Therefore, we would like to speculate (since there is no data in this regard) that the pattern of low-renin hypertension (and perhaps salt-sensitivity) of Caribbean Hispanics may be the consequence of epigenetic changes over successive generations, most likely determined by climate or dietary habits peculiar to the Caribbean region.

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