Recurrent stroke in African Americans

Ruland et al. analyzed baseline characteristics and risk-factor control for 1,809 African American patients with recent ischemic stroke followed for 2 years. The authors report that baseline disability and poor blood pressure control were predictive of recurrent stroke. Risk increased by 10% to 12% for each 10 mm Hg increase of blood pressure.

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Predictors of recurrent stroke in African Americans

Commentary by Brett Kissela, MD

There is controversy about the investigation of risk factors specific to minority race/ethnic groups. Some argue that the application of race/ethnic-specific findings to patient care is "racial medicine" and inappropriate since the same standards should be applied equally to the care of all patients. The gist of this argument is that race is a social construct rather than a scientific classification and that most members of the general population are heterogeneous, limiting the value of race/ethnicity as a biologic marker.[1]

And yet, most patients self-identify with one race/ethnic group and clear disparities exist among these self-identified race/ethnic groups in diseases such as stroke. Stroke-related mortality is higher among self-identified African Americans vs other self-identified race/ethnic groups. This excess stroke-related mortality is caused by higher incidence rates of stroke in African Americans vs others, without an increase in case-fatality after stroke.[2] Furthermore, the burden of stroke in African Americans disproportionately affects younger age groups in the African American population vs whites.[2]

African Americans have been relatively underrepresented in stroke clinical trials, and in research on ischemic stroke recurrence. There is much to be learned from research on health disparities in stroke. Knowing which factors predict recurrent stroke in African Americans will allow us to determine the best practices for recurrent stroke prevention in these patients.

The Ruland et al. assessment of factors that predict stroke recurrence in African Americans used data from the African American Antiplatelet Stroke Prevention Study (AAASPS).[3] African Americans who had a noncardioembolic ischemic stroke, and who did not require carotid endarterectomy, were randomized to treatment with either ticlopidine or aspirin at standard doses. Hypertension and poststroke disability were the two most important predictors of recurrent stroke in multivariate analysis within the study population emphasizing the importance of aggressively treating hypertension to prevent subsequent stroke. In the AHA/ASA Guidelines for Prevention of Stroke, it is a Level I, Class of Evidence A recommendation that hypertension be treated after the hyperacute period to prevent further strokes or vascular events in patients with ischemic stroke or TIA (TIA).[4] Notably, the benefit of antihypertensive treatment extends to persons without a history of hypertension. Treatment of hypertension is important for all stroke or TIA patients but especially those with other vascular risk factors such as diabetes, high cholesterol, and obesity. Benefit of blood pressure treatment has typically been seen with a reduction of approximately 10/5 mm Hg in previous studies, and it has been recommended that the treatment goal is "normal" blood pressure of $<120/80$.[5] Ruland et al. found that each 10 mm Hg increase in systolic blood pressure increased the hazard of recurrent stroke by about 10%. It is also noteworthy that 48% of previously nondisabled subjects in the AAASPS became disabled or died after a recurrent stroke.

Previous studies have described an association between other risk factors and stroke recurrence including diabetes or elevated blood glucose levels, poststroke disability, previous strokes or TIAs, sex, age, and ethanol abuse. Ruland et al. did find a trend toward recurrence associated with multiple strokes and diabetes.

Most previous studies of stroke recurrence had small numbers of African American patients, making this study important for optimal stroke prevention in this high-risk race/ethnic group. The current study excluded patients requiring carotid endarterectomy or whose eligibility stroke was deemed cardioembolic, limiting the generalizability of the results to all stroke patients. Further research in this area is needed, so that we can fully understand race/ethnic-specific factors that predict stroke recurrence and thus tailor our stroke prevention efforts appropriately to each race/ethnic group.

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