Racial Differences in Aortic Plaque Among Ischemic Stroke Patients

To the Editor:

We read with interest the article by Gupta et al concerning racial differences in aortic plaque among ischemic stroke patients.1 As the authors state, no previous studies have compared thoracic atherosclerotic plaque burden among racial groups. They report a lower prevalence of aortic plaque in black stroke patients compared with whites, despite higher rates of hypertension and diabetes mellitus in the former group. However, the reasons for transesophageal echocardiography (TEE) investigation in this retrospective study may require further clarification: did every stroke patient undergo TEE or only a select group in whom no other stroke cause could be identified? If there was some selection process, what percentages of the different racial group of stroke patients underwent TEE? The answers to these questions will determine the extrapolability of these data to the US population.

We have prospectively assessed 105 consecutive patients with recent cerebrovascular events and in contrast to Gupta et al found that white patients had a significantly higher incidence of aortic atherosclerosis using univariable analysis.2 However, this significance disappeared on age adjustment in the bivariate analysis, suggesting that the racial difference could be explained by age.

Gupta et al also conclude that racial differences cannot be explained by existing risk factors.1 It appears, however, that atrial fibrillation was not included in this list. The Stroke Prevention in Atrial Fibrillation (SPAF) III study reported that aortic plaque is prevalent among patients with atrial fibrillation.3 In the Northern Manhattan Stroke Study, fewer blacks (11%) had atrial fibrillation compared with whites (29%).4 Similar low rates of atrial fibrillation among stroke patients have been reported in South African black patients.5 It is conceivable that the lower rate of atrial fibrillation among black patients may explain racial differences in the associated aortic plaque in this group.

Souvik Sen, MD, MS
UNC Stroke Program
Chapel Hill, North Carolina

Stephen M. Oppenheimer, MD, PhD
Pharmanet Inc
Princeton, New Jersey


Response

We appreciate the comments and questions by Drs Sen and Oppenheimer. We regret inadvertently not citing their work in our article. In our study, all patients with the diagnosis of acute ischemic stroke at The University of Alabama Hospital in Birmingham, Alabama, underwent TEE, including patients with atrial fibrillation. Atrial fibrillation patients were initially excluded from the study but were included during the peer-review process. We had 81 (5.2%) patients with atrial fibrillation, of which 20 (1.28%) were black and 61 (3.9%) were white. It was noted that whites had significantly higher atrial fibrillation when compared with blacks (risk=2.28, \( P=0.001 \)). This incidence is much lower than that found in the Northern Manhattan study. Even after excluding patients with atrial fibrillation, the results of our study still showed a higher prevalence of aortic plaques in whites as compared with blacks. Very few patients belonged to other ethnic groups.

Vishal Gupta, MD
Navin C. Nanda, MD
University of Alabama at Birmingham
Birmingham, Alabama
Racial Differences in Aortic Plaque Among Ischemic Stroke Patients
Souvik Sen and Stephen M. Oppenheimer

Stroke. 2003;34:e76; originally published online June 12, 2003;
doi: 10.1161/01.STR.0000078837.04526.2F
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2003 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://stroke.ahajournals.org/content/34/7/e76

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Stroke can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Stroke is online at:
http://stroke.ahajournals.org//subscriptions/