Subclinical Cerebrovascular Disease in Older Adults

To the Editor:

We read with great interest the article by Sojkova et al1 published in the February issue of Stroke. In a cross-sectional study including 73 participants aged 70.9±7.3 years without clinical cerebrovascular disease, the relationship between carotid intimal medial thickness (IMT) and regional cerebral blood flow (rCBF) have been investigated. The greater IMT has been found to be associated with lower rCBF in occipitotemporal regions and with higher rCBF in the frontotemporal regions. Gender differences in the relationship between IMT and rCBF have been observed. The IMT increases with increasing age. The authors have also found that the mean arterial pressure only minimally affects the relation between IMT and rCBF when the blood pressure is well-controlled. However, it is not mentioned which drugs have been used. The antihypertensive agents may have different effects on carotid IMT and rCBF. Sojkova et al have assessed the cognitive status of the subjects by Mini-Mental State Examination only. Undoubtedly, neuropsychological assessment using standardized tests to identify persons in the early stages of cognitive impairment2 aiming toward the diagnosis of subclinical cerebrovascular diseases are needed.

Several studies on the rCBF in neurologically asymptomatic hypertensive patients have also reported reductions in blood flow more marked in the frontal, temporal, and parietal regions.3–5 A recent longitudinal positron emission tomography study in hypertensive patients has demonstrated greater rCBF decreases in the prefrontal, anterior cingulated, and occipital areas, as well as in the hippocampus in comparison with controls.6 By using quantitative volumetric MRI, it has been found that hypertension exacerbates the brain atrophies because of advanced age. The strongest interaction of age and hypertension has been observed in the temporal and occipital lobes.7

The data available show that the changes of IMT and rCBF in older adults are mainly associated with age and hypertension. However, the relationship between IMT and rCBF is not yet fully understood, and the contribution of this nonrepresentative study to its clarification is limited. Obviously, further population-based studies are required to clarify this issue.

Disclosures

None.

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Stroke. 2010;41:e447; originally published online April 29, 2010; doi: 10.1161/STRKEAHA.110.582270
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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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/41/6/e447

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