Letters to the Editor

Proposed Method for Analyzing Carotid Endarterectomy Results

To the Editor:

The recent series of letters to the Editor published in Stroke regarding the proposals by Jonas1,2 included a suggestion that caused Dr. Jonas to refer to his response3 to an article of mine.4 In reviewing this article, Dr. Jonas states that “The assumption least favorable for surgery would be that 10 operative strokes occurred in the 146 relevant carotid endarterectomy patients, a 6.8% operative stroke plus death (S + D) rate.”

In reviewing our article, I do not know how Dr. Jonas could have obtained these figures since data for the mortality and morbidity in patients with transient ischemic attacks (TIAs) was not included. However, our data do indicate that for the 152 patients operated on for anterior hemispheric TIAs (including amaurosis fugax), there were no deaths and there was a permanent neurologic deficit rate of 2.6%. Thus, the late stroke-free survival rate for this group of patients is significantly better than that calculated by Jonas using his method of intact months of patient survival (IMPS).

I believe that our results are typical of those obtained by many other surgeons in good centers. In addition, Dr. Jonas has not dealt with our data objectively but must have made some assumptions highly prejudicial against surgery in obtaining a presumed morbidity and mortality rate that was three times our actual experience. Thus, I would caution Dr. Jonas and your readers to use extreme care in evaluating the available data before coming to such important and damaging conclusions regarding the results of carotid surgery.

Rather than argue that the average results of carotid surgeons in this country do not demonstrate a significant advantage over the natural history of the disease for patients with TIA, it may well be that we should determine the boundary line of acceptable morbidity and mortality, below which surgery would be inappropriate. Statistics for both the surgeon and the institution could define those institutions in which surgery is safe and beneficial.

I do hope that the forthcoming randomized prospective studies will address this issue with sufficient power to permit arriving at such a conclusion.

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Significance of Age-Related White Matter Lesions

To the Editor:

Our studies of Alzheimer’s disease have recently linked the presence of periventricular white matter lesions (PWMs)1,2 with both an increased prevalence of motor and gait deficits on neurologic examination3 and altered patterns of glucose utilization measured by positron emission tomography.4 Several reports, including our own, have also confirmed the association of PWMs on computed tomograms (CTs) demonstrating small vessel disease in the brain.5,6 The hyaline and white matter rarefaction are consistent with hypertensive encephalopathy.7,8 In recent years, numerous CT and magnetic resonance imaging reports have indicated that PWMs affect as many as 10–30% of cognitively normal elderly study subjects. The prognostic and clinical significance of these lesions is largely unknown in otherwise normal individuals. There has been a failure to find differences in the prevalence of gait impairments in elderly normal subjects as assessed on comprehensive and standardized neurologic examination.9 We now report that PWMs in normal subjects are associated with subtle deficits in motor control.

We analyzed the performance of 17 cognitively normal elderly subjects (six with CT evidence for PWMs in their frontal lobes and 11 without such lesions) on cognitive and motor tests. All subjects were research controls falling within accepted ranges of normality based on extensive medical, neurologic, psychiatric, and cognitive examinations (e.g., Global Deterioration Scale4 scores of 1 or 2). Details of our clinical evaluations can be found elsewhere.4,5 The group with frontal PWMs was equivalent to the group without such lesions in age (range 52–80 years) and performance on nonmotor, cognitive evaluations of immediate memory (digit span), recent memory (paragraph recall), and language function (vocabulary).

Our results show that the group with frontal PWMs had significant (p<0.05) deficits on psychometric motor tests, including digit symbol substitution and choice reaction time, and on a computerized motor tracking task. The motor tracking task required the execution of a head-tilt maneuver to reach and fix onto a stationary visual target. The scores from the head-tracking test were the most accurate indexes of group member-
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