Letters to the Editor

Letters to the Editor will be published, if suitable, as space permits. They should not exceed 1,000 words (typed double space) in length, and may be subject to editing or abridgement.

Carotid Atheroma

To the Editor:

In the summary and discussion sections of their paper (Stroke 13: 567-569 September-October, 1982), Harrison and Marshall imply that their data reflect the natural history of untreated atherosclerotic disease of the internal carotid artery. They point out that their patients with internal carotid artery occlusions had a greater mortality and incidence of stroke than patients having carotid artery stenosis and ulcerative disease. They failed to emphasize that 61 of their patients with carotid stenosis underwent endarterectomy and can hardly be compared with a group of untreated patients with carotid artery occlusions.

Since none of their 44 patients with carotid artery occlusion were treated with EC-IC bypass surgery, their paper provides important information regarding the natural history of this entity. It would be interesting to know how many of the 38 patients in this group in whom followup information is available received anticoagulants, antiplatelet medications, etc.

Sincerely yours,

Larry A. Rogers, M.D.
Charlotte Neurosurgical Associates, P.A.

The previous letter was sent to Doctors Harrison and Marshall, and their comments follow.

Table

<table>
<thead>
<tr>
<th>Angiographic appearance (number followed)</th>
<th>Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aspirin</td>
</tr>
<tr>
<td>normal (36)</td>
<td>6</td>
</tr>
<tr>
<td>irregular (58)</td>
<td>7</td>
</tr>
<tr>
<td>stenosis (56)</td>
<td>1</td>
</tr>
<tr>
<td>occluded (38)</td>
<td>5</td>
</tr>
</tbody>
</table>

*Contralateral vessel

To the Editor:

Dr. Rogers asks what medical treatment was used in the patients with carotid occlusion described in our paper on the prognostic significance of the angiographic findings in patients with TIAS, RINDS and recovering strokes. This is set out in the table.

We would agree with him that our data should not be used to predict the outcome of untreated cases. It does, however, reflect the prognosis associated with current therapy in use prior to the widespread employment of the ECIC bypass procedure.

Yours faithfully,

M.J.G. Harrison
J. Marshall

The Reta Lila Weston Institute of Neurological Studies
The Middlesex Hospital Medical School
(University of London)
London, WIN 8AA

Value of N20 Evoked Response in Acute Sensory Stroke

To the Editor:

Since carotid endarterectomy may increase memory, and intellect, and perhaps blood flow, we hypothesized that there could be a concomitant electrophysiologic change measureable over a period of several months.1 We measured median somatosensory evoked responses before and after surgery to compare latencies and amplitudes between cerebral hemispheres and between the operated group and an age-matched control group. After the project was complete, one unique patient had an acute severe stroke causing an apparent accentuation of the so-called N20, thought to represent a thalamic waystation.2

Twelve patients were recorded one week prior to surgery and on two to four occasions after surgery, at monthly intervals. Parameters of stimulation, electrode location, and recording sites mimicked popular methods. None had sensory deficits prior to surgery. Control patients were seven with carotid bruises who had been rejected from surgery because of mild lesions (less than 30% stenosis) on angiography or mild symptoms, and three asymptomatic volunteers. Measurements in these latter ten were similar enough that they were used as a single comparison group.

A four channel Nicolet CA 1000 averager was used. N20 was easily measured at every session; N23 and N27 were too subtle to measure.

FIGURE 1. N20 (N2) increased in amplitude and a broad positive deflection apparently developed as a result of a right cerebral infarction. Restoration to near baseline is seen in the bottom tracing.
from month to month. Means, standard deviations, standard error of the mean, variance, co-variance, and analysis of variance were derived by computer (4341 IBM) comparing results before and after surgery, between hemispheres, and between control and operated groups.

There were no statistically significant differences between groups. (Tables are available.) After the entire study was complete, one 71 year old male returned for a carotid endarterectomy on the second side. After seemingly successful surgery, with normal EEG monitoring, he awakened with a dense left hemiplegia, facial weakness and left gaze palsy. He could not identify gross joint movements of fingers, wrist or elbow, or interpret 5 cm.-size traced figures in his palm. Superficial sensation seemed intact. His evoked responses are shown (fig. 1) because of the rarity of such a series recorded prior to a well-documented cerebral infarction. His computerized cerebral tomography, on the day of the fifth recording, showed an ill-defined 2 cm. right parietal lucency lateral to the thalamus. His sensory and motor examination improved rapidly over the next three days; traced figures interpretation and position sense were normal in four days. One month later he had a residual mild hemiparesis but no sensory deficits.

The changes in cerebral circulation after endarterectomy in neurologically normal patients were too slight to measure by median-evoked somatosensory recording. The N20 amplitude increase recorded in one patient within twenty-four hours, after a severe clinical disruption of sensation, was consistent with the preservation of a thalamic waystation and, at least in this case, with excellent recovery of sensation. Considering that lesions causing severe and permanent loss of sensation tend to obliterate N20, the preserved and amplified N20 in this case suggested a good prognosis and was an accurate, small factor in his clinical management. Repeat angiography and possible embolectomy were postponed and then cancelled. Hypersynchronization or facilitation of N20 has been described by Obeso in a group of patients with severe but varied cerebral insults considered to be remote from the primary sensory-motor strip. There are no series of patients with baseline pre-stroke studies, however. This case documents the suggestion that evoked responses synapsing in the thalamus or thalamo-cortical radiations may be facilitated by adjacent lesions in the same hemisphere and that such facilitation and preservation may prove to be of predictive value in the management of acute strokes with sensory components.

Edward V. Spudis, M.D.
Department of Neurology
Bowman Gray School of Medicine.
Winston-Salem, N.C.

Acknowledgments
Mr. Robert E. Kinch and Mr. Charles L. Rhodes, Jr. advised statistical procedures.

References
Value of n20 evoked response in acute sensory stroke.

E V Spudis

Stroke. 1983;14:634-635
doi: 10.1161/01.STR.14.4.634.b

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/14/4/634.2.citation