Letters to the Editor

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Homonymous Hemianopsia Due to Posterior Ischemia as a Model for Quantification of Neurologic Deficit

To the Editor:

Descriptions of the natural history of brain infarction and evaluation of therapeutic interventions rely on definitions of the degree of handicap and neurologic deficit of the patients. The Barthel index is the best known of the functional evaluation systems since it is the easiest to perform. The index describes basically the degree of independence from nursing care or other medical help. The maximum score of 100 reflects a high degree of independence, but not freedom from symptoms, since handicaps related to speech impediments are not included in the evaluation. At the lower end of the scale, improvement in the patient's condition is not reflected in a higher score. Therefore, the Barthel index is not suitable for an evaluation of subtle therapeutic effects despite a close correlation with the neurologic score up to the level of relative autonomy at a score of approximately 60 points.1

The Mathew scale is closely related to the degree of neurologic deficit. Points are assigned to different symptoms and signs, with a maximum score of 100 points. However, the large number and variety of parameters evaluated must be accommodated in a few crude categories, and evaluation is ultimately subjective. As a result, a study with four independent observers demonstrated agreement beyond the level of chance for only eight of 13 symptoms.2 Modification according to Orgogozo and Dartigues3 eliminates categories with reproducibility of <75%. The Mathew scale does not consider visual field defects or sensory loss, so that findings must be regarded as grossly simplified.

Documentation of homonymous visual field defects is particularly well suited to the evaluation of the natural history and clinical course of brain infarction. We confine our evaluations to occipital lobe infarction since perimetry in these patients is usually not limited by problems attributable to speech disorders. Kinetic and static perimetry are highly standardized and detect and quantify visual neurologic deficits to degrees unattainable with any other test (Figure 1). If no other disorder (usually an ophthalmologic problem) affects the visual fields, the planimetric area of the visual field defect can be expressed as a proportion of the original visual field, assuming that the latter is identical to the unaffected hemifield. An investigation of reproducibility in kinetic perimetry revealed discrepancies in 16.5% of cases.4 The variance between determinations of visual fields was approximately 13%.

We therefore believe that occipital lobe infarction, which is usually due to ischemia of the posterior cerebral artery, is a convenient and easily described model for brain infarction, permitting evaluation of the natural history of brain infarction as well as the effects of therapeutic interventions in this disease entity.

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References

Oral Contraceptives and Stroke

To the Editor:

Contrary to the opinion expressed in the July 1988 issue of Stroke by Drs. Xuereb and Pullicino, the association between oral contraceptive use and stroke is far from “well-documented.” In fact, many informed neuroepidemiologists maintain that the evidence is at best circumstantial. The collaborative study published in 1973 and quoted by the authors2 uses methodology unacceptable today, while similar conclusions by the Royal College of General Practitioners undertaken in 1977 in the UK were subsequently repudiated by the same group in 1981.5 Wolf et al in 1983 could not determine a causal effect, except that the incidence of subarachnoid hemorrhage appeared increased in women taking oral contraceptives. Wiseman and MacRae in 1981 reviewed the subject and concluded that “the pill” decreased the

![Figure 1](chart.png)  
**Figure 1.** Natural history of ischemic infarction of posterior cerebral artery with resolution (>4°) of visual field defect. Results of kinetic perimetry from 72 patients until steady-state conditions are reached.3
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