Clinical and Arteriographic Comparison of Amaurosis Fugax with Hemispheric Transient Ischemic Attacks

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SUMMARY Eighty-seven patients with either amaurosis fugax (40 patients) or hemispheric transient ischemic attacks (47 patients) were studied to determine whether the two symptom groups could be differentiated clinically and arteriographically. Clinical data assessed

AMAUROSIS FUGAX and hemispheric transient ischemic attacks are the most common symptoms of cerebrovascular occlusive disease. Acta Med. 40: 183-199, 1966

were age of patient, incidence of cardiac disease, and presence of claudication, hypertension, diabetes, and carotid bruits. Contrary to a prior report, our results indicate no significant difference between the 2 patient groups based on clinical and arteriographic findings.

hemispheric transient ischemic attacks. Amaurosis fugax was defined as transient monocular blindness; transient ischemic attack was defined as a focal neurologic deficit lasting less than 24 hours, probably attributable to ischemia in the distribution of the carotid arterial system and leaving no residua from the attack. Patients who had both amaurosis fugax and hemispheric transient ischemic attacks or whose symptoms persisted for more than 24 hours were eliminated from the study.

Clinical records and carotid arteriograms were available for 40 of the patients with amaurosis fugax and 47 with hemispheric transient ischemic attacks. The clinical records of each patient were reviewed for information regarding the patient's age, presence of carotid bruit, diabetes, and carotid bruits. The arteriograms were examined by each author separately for statistical significance. Chi-square methods were used to determine statistical significance.

Carotid arteriography was performed via the transfemoral route with magnification techniques and included lateral and oblique views of the carotid bifurcation. The arteriograms were examined by each author separately for the degree of stenosis and for ulceration. In establishing the degree of stenosis, the diameter of the narrowest part of the
The pattern of stenotic and ulcerative lesions in the two groups showed no statistically significant difference (table 2).

Discussion

There are two major mechanisms for the pathogenesis of both amaurosis fugax and hemispheric transient ischemic attacks. First, emboli originating from the surface of an atherosclerotic ulcerated plaque can cause temporary occlusion of retinal or cerebral vessels. These emboli consist of aggregates of platelets, small bits of thrombi, and degenerative atheromatous material and are rapidly lysed, resulting in the cessation of symptoms. Second, stenosis of the carotid vessels can lead to reduction in critical perfusion. In addition, tight stenoses predispose to formation of mural thrombi, fragments of which may subsequently embolize to the retinal or cerebral vessels.

Since these two mechanisms are similar, any lesion in the carotid circulation might result in embolization or decreased blood flow to either the retinal (amaurosis fugax) or cerebral (hemispheric transient ischemic attack) circulation. Therefore, as we have found, the overall clinical picture is the same in patients with amaurosis fugax and hemispheric transient ischemic attacks. Factors associated with cerebrovascular occlusive disease, such as we investigated (table 1), are equally frequent in both groups. In like manner, auscultatory and arteriographic findings are similar in both groups.

Our results differ markedly from those of Slepyan et al. who found a difference in average age of 5 years between the two groups (8 patients with amaurosis fugax and 23 with transient ischemic attacks). Their patients with amaurosis fugax had no evidence of cardiac disease; 60% of our patients with amaurosis fugax had confirmed myocardial infarction or congestive heart failure. Bruits were noted in only 45% of our patients with amaurosis fugax (rather than the 88% reported by Slepyan et al.) — the same frequency as we investigated (table 1), are equally frequent in both groups. In like manner, auscultatory and arteriographic findings are similar in both groups.

References

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