

## Factors causing prolonged hypoperfusion after transient ischemic attack

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Even during the symptom-free stages, patients with a TIA often experience cerebral blood flow disturbances. In order to evaluate the factors which cause this abnormality, we studied the cerebral blood flow disturbance, anatomy and clinical status in 21 patients after TIAs. The results of  $^{99m}\text{Tc}$ -hexamethyl-propylene-amine oxime SPECT were compared with CT, cerebral angiogram, cerebrovascular risk factors and clinical findings to determine which factor is most responsible for the hypoperfusion of brain after TIA. The overall sensitivity rates in detecting a lesion were 67% in SPECT and 19% in CT. The hypoperfused area tended to be large in patients who had intracranial, severe stenotic, multiple, or hemodynamically significant arterial lesions on the ipsilateral side. No such relationships were found between other examinations. We conclude that hypoperfusion after TIA essentially reflects a continuous cerebral blood flow disturbance that can be attributed to atherosclerosis of the cerebral arteries, with subsequent embolic and/or hemodynamic cerebral ischemia, although there may be a variety of processes.

**Key words:** TIA, cerebral blood flow, cerebral angiography,  $^{99m}\text{Tc}$ -HM-PAO SPECT