

Abstract

J Neurol Sci. 1998;156(1):102-6.

Plasma levels of neuroexcitatory amino acids in patients with migraine or tension headache.

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OBJECTIVE AND METHODS: Plasma amino acids were analysed in patients with migraine with (9) and without (80) aura, in patients with tension headache (14) and in controls (62).

RESULTS: The neuroexcitatory amino acids glutamic acid, glutamine, glycine, cysteic acid and homocysteic acid were elevated in migraine patients while total thiols (cysteine/cystine) were reduced. Patients with tension headache had values which were similar to those of controls. Tryptophan was elevated in migraine patients without aura only. Studies on two patients showed that the raised resting excitatory amino acid levels became still further elevated during a migraine attack.

CONCLUSION: These results show that high concentrations of neurotransmitter amino acids occur normally in migraine patients and suggest that this profile may be a contributory factor in migraine attacks. Tension headache, however, has different biochemical parameters.

PMID: 9559996

