

Platelet monoamine oxidase-B activity and vitamin B-12 in dementia

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This study attempts to determine the levels of vitamin B12 and platelet MAO-B and to find the correlation between these two parameters in cases of dementia.

It is hoped to find enough evidence to advocate these parameters as biological markers for dementia as well as to provide some biochemical support for the clinical distinction between the two major types of dementia, degenerative and vascular, that has recently been called into question.

40 demented patients (20 with degenerative dementia and 20 vascular dementia selected according to both DSM-IV criteria and scores on Hachinski scale) and 20 control (10 non-demented depressed and 10 healthy subjects). All subjects were assessed by the Zagazig Depression Scale and the Hamilton Depression Scale. Platelet monoamine oxidase-B activity and plasma vitamin B-12 level were determined chemically for all subjects. Demented patients have significantly higher platelet MAO-B activity and lower vitamin B12 level than depressed and normal subjects. There is significant difference between degenerative and vascular dementia groups as regard serum vitamin B12 level but not as regard platelet MAO-B activity.

Platelet MAO-B as well as vitamin B12 level are significantly correlated with severity of dementia, whether degenerative or vascular, and irrespective of severity of depression. Correlation between platelet MAO-B activity and vitamin B12 level in all groups were not significant. (A) The increased MAO-B activity and decreased serum B12 level in patients with dementia are confirmed. (B) MAO-B activity and serum B12 level are significantly correlated with severity of dementia.