CRITERIA FOR EARLY DIAGNOSIS OF ALZHEIMER'S DISEASE (AD)

Dilshod Tolibov and Gulnora Rakhimbaeva

Tashkent Medical Academy, Uzbekistan

Background: In these days, there is no exactly known biomarker for self-use in the clinic that cannot be a decisive factor in determining the diagnosis of Alzheimer's disease. This is primarily due to the crossover definition of known biomarkers correlated with the course of AD, with other pathologies of the nervous system. In this regard, we hypothesized the integrated use of important biomarkers for early diagnosis, monitoring the effectiveness of therapy and identifying risk groups in AD. The essence of the proposed hypothesis is the simultaneous determination of a number of biomarkers (dehydroepianderosterone sulfate (DHEA-s) in patients, when establishing discriminatory levels of these compounds in the development of an appropriate diagnosis or referring the patient to the risk of developing AD.

The aim of the study: The aim was to determine relationship between the indices of DHEA-s and the ischemic Khachinsky scale.

Material & Methods: 135 patients with presenilic type of AD (n=32), senile AD (n=34) and chronic cerebral ischemia (n=69), and 20 volunteers from the control group were examined. To determine the cognitive dysfunction, the Khachinsky scale was used. The level of DHEA in the blood serum was determined by oxidation with the Fe^{2+} catalyst and the results of the DHEA concentration were compared before and after oxidation.

Results: According to Khachinsky scale, in 25 (78%) patients of the 1st group, 26 (76%) patients of the 2nd group had ≤4 point, in 69 (100%) patients of the 3rd group there were ≥7 points. In 7 (22%) patients in group 1 and 8 (24%) patients in the 2nd group with AD, the distribution of scores in the interval from 4 to 7 was observed, which does not allow to diagnose, reasonably according to the Khachinsky scale, the reason for these patients neurodegenerative disorders. Founding of DHEA-s in patients of first and second groups with a distribution in the range of 4 to 7 on the Khachinsky scale showed that levels of DHEA-s are comparable to those in patients with AD. Difference between the level of DHEA-s before and after oxidation is lower 1.0 µmol/l (in patients with a vascular cause of pathological states of the brain that difference between the level of DHEA-s before and after oxidation is greater than 1.0 µmol/l).

Conclusions: Determination of the serum level of DHEA in patients with a comparison of the data from Khachinsky scale allows one to diagnose early form of Alzheimer's disease along with the traditionally used beta-amyloid markers, which is an informative, economic more appropriate method

Biography

Gulnara Rakhimbaeva is Member of the editorial board of the *Journal of Neurology*, a member of the World Society for Stroke ESO, WSO, a member of the European Academy of Neuroscience EAN, a member of the American Association for Alzheimer's Disease (AAA), a member of the IAPRD Scientific Committee, Vice-president of the Uzbek branch of the international league on struggle against epilepsy ILAE, the Vice-president of Association of Neurologists of Uzbekistan.

gulnora.rakhimbaeva@mail.ru