

EARLY DETECTION OF POTENTIAL CHRONIC ALCOHOLISM BY DETERMINING THE LEVEL OF IGA, MCV AND TRANSFERRIN

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The level of IgA, transferrin, and the MCV and the ratio of IgA/transferrin were used for the detection of parameters of chronic alcoholism and in parallel, the GGT activity was measured. Three groups of subjects were processed for this study: healthy subjects (N = 18), chronic alcoholics (N = 20) treated chronic alcoholics (N = 15), and finally, a group of workers who are employed at the plant spirits (N = 15). A nonparametric Mann-Whitney U test was used to process the obtained values. There were no significant differences between treated alcoholics and healthy subjects in all parameters tested (mean value with an AA: IgA = 2.9g/L, MCV = 93.8, transferrin = 3.1g/L, IgA/transferrin = 0.92, GGT = 11.4U/L; healthy subjects: IgA = 2.83g/L, MCV = 93.6, transferrin = 3.2g/L, IgA/transferrin = 0.9, GGT = 7.1U/L). In the group of untreated alcoholics, IgA values, MCV, and IgA/transferrin ratio were increased as well as the GGT activity (as expected) compared to healthy and treated alcoholics (alcoholics: IgA = 5.1g/L, MCV = 101, transferrin = 2.78g/L, IgA/transferrin = 1.74, GGT = 101.4U/L). Regarding the workers employed in the factory of alcoholic beverages, the level of MCV was significantly higher than in healthy individuals and that value was close to that in alcoholics (IgA = 1.95g/L, MCV = 99.6, transferrin = 2.8g/L, IgA/transferrin = 1.14, GGT = 18.7U/L). The concentration of transferrin was reduced in workers, so the ratio of IgA/transferrin is slightly higher than in healthy individuals, but without a significant difference. It can be seen that the results of the examined parameters may help not only to detect chronic alcoholics but also for monitoring the treatment, given the fact that, paradoxically, many alcoholics use alcohol while under treatment.

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Key words: chronic disease, alcoholism, erythrocyte indices, MCV, transferrin, IgA, early detection