Psycho-Endocrine Markers of Relapse Prediction in Alcohol Addiction

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Abstract:

Background: There are multiple psychological and endocrine factors which may provoke early relapses in alcohol dependent patients, but it is not known in which measure they correlate with the risk of alcohol dependence relapse.

Aims: To study the possibility of prognostication of early relapses in alcohol dependence, taking into account the correlation of various psycho-endocrine factors with the disease relapse risk.

Method: The design of the study was based on prospective and retrospective clinical and psychological exploration (to quantify the intensity: craving [CR] anxiety [ANX] dysphoria [DISF] depression [DEPR]) and radio-immunological methods of evaluation of the plasmatic level of hormones (adrenocorticotropic hormone (ACTH), prolactin (PRL), cortisol (F)). The complex analysis of data obtained by statistical methods (cluster analysis).

Results and Discussion: To assess the likelihood of early relapse in alcohol addiction were investigated clinically and laboratory results of 158 patients, being in the initial period of installed remission of alcohol dependency (the first 6 months after the anti-alcoholic treatment). Using a mathematical statistic method (cluster analysis) was studied how different factors correlate (emotional, and endocrine) with alcohol dependency risk of relapse. The complex analysis of data obtained by statistical methods (cluster analysis), has shown that the prognosis of early alcohol relapses is more efficient when a set of different factors is analyzed.

Conclusion: An efficient prognosis (in 66.07% of cases) can be obtained by the application of the formula of the discriminant function f = 19.61456 x (CR) 0.000101 x (ANX x PRL) 0.301934 x (ANX x CR) + 1, 8236 x (DISF x CR) x 4.13376, developed in the present study. Thus, the psycho-endocrine parameters: the plasma level of prolactin, anxiety, craving, dysphoria can be considered markers in relapse prediction in alcohol dependence.

Keywords

Alcohol Addiction, Craving, Anxiety, Depression, Prolactin, Cortisol, Early Alcoholic Relapses, Cluster Analysis