THE POSSIBILITY OF PREDICTING THE TIME OF FORMATION AND DEVELOPMENT OF ALCOHOL DEPENDENCE: THE ROLE OF GENETIC RISK, FAMILY WEIGHT AND ITS LEVEL

[1]Sedenkova Marina Vladimirovna, [2]Pogosov Sergey Andreevich, [3]Sharapova Dilfuza Nematillayevna, [4]Shernazarov Farrukh

[1]Ural State Medical University, Russian Federation city of Yekaterinburg

[2]Northwestern State Medical University I. I. Mechnikova, Russian Federation city of Saint-Petersburg

[3]Samarkand State Medical University Clinical ordenator in the direction of psychiatry

[4]608 group students of Samarkand State Medical University Faculty of Medicine

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Abstract. *In 40-70% of cases of Alcohol Dependence, the contribution of genetic factors to the etiopathogenesis of this disease is significant. Research on the effect of family weight on drug disorders in a group of patients of different sexes using evidence-based quantitative approaches as a genetic factor in the formation, development and course of alcohol dependence is of great interest. Among the blood relatives of the patient, not only the fact of the disease is important, but also the degree of severity as a measure of the number of such cases or "genetic load" pressure.*

Keywords: *formation, alcohol dependence, genetic factors, family weight.*

Introduction. Alcohol addiction, like other drug disorders, belongs to the class of diseases with a hereditary predisposition in modern medical genetics [1-3]. The genetic contribution to the etiology and pathogenesis of alcohol dependence is significant, accounting for 40-70% [4-7]. The predisposition to alcohol dependence is a set of distinctive features of brain neurochemical systems that are genetically determined and secretly present in the population, ensuring the rapid and detailed development of addiction in alcohol consumption [8-11]. The most obvious and clinically present sign that allows us to predict the presence of a significant genetic predisposition in an individual is familial severity — the presence of the same disease conditions among the patient's blood relatives [12-15] and determining its amount — the level or density of familial severity [9]. Several adequate levels of quantitative data suitable for analysis of rigorous evidence can be achieved by evaluating the severity level as the number of sick relatives in the patient's family [16-19]. As you know, the likelihood of alcoholism is determined by genetic and external factors. Among non-genetic factors, characteristic features can also play a role, including those closely related to the emotional sphere [20-22]. From them, the risk of developing alcohol dependence with accentuations of character can be expected to increase [23-24]. With alcoholism, the frequency of this pathology in the same country for two or three generations is significantly different. In any case, the frequency of alcoholic psychoses in 1940 and at the end of the last century is significantly different [25]. This means that external (non-genetic) factors can have a significant impact. Among non-genetic factors, the following can be listed: religious prohibitions, culturally conditioned sober lifestyle traditions [26-30]. Genetically, the Old Believers are practically no different from the rest of the Slavs, but they do not drink, do not smoke, do not use psychoactive substances (surfactants). In the conditions of free alcohol sales and constant

traditions of alcohol consumption, the frequency of the emergence of alcoholism increases sharply [31-33]. It is natural to assume that some characteristic features can contribute to the frequent consumption of alcohol and, therefore, the formation of addiction. With character accents, this can even happen more often. Nevertheless, despite attempts to conduct research in this area, the complexity of the problem is associated with two cases: 1) the fact that no particular role of personal pathology in the development and process of Alcoholism has been proven [34]. If for some types of personal pathology (predisposition to depressive or anxious States, increased suggestion, infantilism), perhaps for others (paranoia, isolation, anankastic characteristics), this remains unproven; 2) the assumption that rather than characteristic, biological characteristics are more pronounced is quite acceptable the possibility of relatively rapid formation of alcohol dependence and the peculiarities of the course of alcoholism [35-36]. The study of the formation and direction of Alcohol Dependence in people who do not identify psychopathy (RL), accentuates and characteristic features (or abnormalities) is assumed to help answer the question of the role of genetic and non-genetic factors in the formation and process of alcoholism. The genetic predisposition to alcohol addiction is hereditary and genetically fortified [37]. Genetic risk is the possibility of disease only for genetic reasons. Risk level-categorical (level) assessment, reflects the genetically determined individual likelihood of the development of the disease [38]. Genetic factors have a significant impact on both the risk of alcohol dependence and the clinical manifestations of the disease [39], but so far a comparative analysis of various aspects of this effect has not been carried out. For proper research, genetic influence on the formation, development and course of alcohol dependence should be assessed using evidence-based quantitative approaches from several sides: through analysis of family alcohol dependence, as a clinical picture of genetic influence, and through analysis of the level of genetic risk for the development of Alcohol Dependence, by identifying signs of genetic risk (DNA Diagnostics) [40-42].

The purpose of the study. to identify possible differences in the formation and course of Alcohol Dependence in patients of different sexes with different levels of family weight and different genetic risks.

Materials and methods. The study was diagnosed with "alcohol addiction 464 inpatient patients of the clinic of the Research Institute of Narcology (F10.2 on ICD-10), of whom 109 (23%) women (CF. age (Me±SD) 41±13.33 years) and 355 (77%) males (42±13.37 years). The study did not include patients diagnosed with" organic, including symptomatic, mental disorders "(f00-f09)," schizophrenia, schizotypal and delusional disorders "(F20-F29)," mood disorders " (F30-F39). We studied the data on the development and course of the disease (age of the first alcohol sample, age of the first hospitalization, age of onset of Alcohol Abuse, age of formation of alcohol withdrawal syndrome (COA)). Family weight data on Narcological diseases was obtained through a clinical interview with the patient and close relative (often the mother), assessing the fact of the presence of family weight, as well as its level (average level – one blood relative with alcohol dependence, high – two or more relatives alcohol addiction). Also, the level of individual genetic risk for the development of substance dependence diseases (surfactants) was assessed by genoprophylation. DNA samples from venous blood were genotyped by the polymerase chain reaction (PCR) method, followed by restrictive analysis. Based on the results of genotyping, the final (resulting) level of genetic risk in each patient was assessed in scores ranging from low (0.5 points) to very high (3 or more points). This study used a basic version of genoprophil: 5 polymorphic locus ha systems of 3 main genes: 1) general genetic risk assessment:

basic universal genetic markers for Category 2 dopamine receptors and tyrosine hydroxylase enzyme genes, when a genetic marker was detected, 1 point was given in assessing the final level of risk; 2) specific risk assessment: markers for an additional Type 4 dopamine receptor gene, when a genetic marker The scores reflect the likelihood of statistically reliable development of the disease in carriers of genetic signs. Comparisons of different levels of family weight and non-weight groups have been made.

Research results. In our sample, 392 patients (84,5%) reported Family weight, with an average weight level of 235 patients (50,6%), and a high level of 157 patients (33,8%). Comparison groups did not differ in the proportion of male women (p=0,528). Patients with total family weight (Me±SD, 25±10,61 years old, p=0.011), average weight level (25±10,38 years old, P=0,075, trend), and high weight level (23±10,91 g, p=0,001 years old) reported regular alcohol abuse by non-family weight patients (28,5±9,27 years old). It should be noted that the age of onset of alcohol abuse (p=0,013) and the age of the first alcohol sample (16±13,92 va 16±15,82 years of age, p=0,04) with differences between high and moderate weight patients. The proportion of patients with early onset of Alcohol Abuse (up to 22 years of age) close to a reliable level is higher in the group of patients with high family weights (36,95%) than in the group with an average family weight (28,09%, p=0,06). In general, patients with familial severity develop COA (30±16,11 l, p=0,013), moderate (34±14,46 g, p=0.063), and high severity (28±17,30 l, p=0,003). compared to patients with no family weight (34±14,46 g). There are differences between patients with high to moderate weight depending on the age of the Osa (p=0,055). As a result, the first hospitalization in high-weight patients occurs much earlier (36±15,03 years) than in moderate-weight patients (40±17,45 years old, p=0,002) and patients with no family weight (41±16,04, p=0,008). Early formation of alcohol withdrawal syndrome (up to 30 years of age) is more frequent in a group of patients with family severity (p=0,012), especially in the group of patients with high family severity. Among the variety of personal manifestations combined with alcohol dependence and dominant in this sample were stagnation, including hyperthymic manifestations (16,5%). The large share belongs to cycloids (12,3%), anankasts (11,6%), sensitive (11,3%), schizoids (10,6%), epileptoids (9,4%) and dysthymics (9,0%). Other prototype variants of individual accentuations, including primitives (8,0%), conformals (5,8%), hysteroids (5,5%), are presented in smaller quantities. The character traits of the patients examined were already identified in childhood, in adulthood, in most cases, significantly increased (70,3%), new ones appeared – 13,2%. In the Postpubertal period, character traits remained unchanged in 67,4% of patients, in 23% of those examined – flattened, in 9,6% of patients – increased, and new ones appeared. Pathological reactions of malfunctions associated with character traits were not recorded in most cases (94,8%). In 13,3% of patients, the elimination of the parental family (up to the patient's puberty) and the upbringing of one mother were recorded. In families with a stepfather in place of their father, this occurs in 6.7% of patients, the rest were brought up in full families. In 26,5% of observations, incorrect education (hyperopec, hypoopec, "Hedgehog gloves", conditions for increasing spiritual responsibility, conditions of rigid relationships) was noted. Statistically significant differences in the redistribution of these violations among patient groups have not been identified. An additional control group for the purpose of registering the characteristics of clinical manifestations of the underlying disease, confirming the diagnosis of accentuations and conducting individual comparative studies, including psychological tests patients. The research group includes 76 patients between the ages of 24 and 45, diagnosed with moderate levels of alcohol dependence

(according to the ICD-10 criteria), in combination with various pathocharacterological characteristics (F60.1-61.0). The average age of patients is 34,4±3,7 years. The systematics of personality and behavioral disorders are primarily based on the clinical picture of existing personality traits and are derived from the criteria defined in ICD-10, which corresponds to the F60 headers specific personality disorders (F60.0-F60.9) and f61.0 mixed diseases. To determine the relationship between the main features of the formation of alcoholism in people with different characteristic features, components of alcohol attraction, as well as simultaneous Affective Disorders (those that do not reach the level of endogenous disorders, but are nevertheless determined by the SCL90-R scale), a factor analysis was carried out according to the data of clinical maps. the manifestation and dynamics of attraction to alcohol at the stage is a relapse of alcohol. The first factor included the age and temporal characteristics of the process of formation and development of alcoholism in people with different characteristic accentuations (table. 4). Perhaps the most important of them are the signs that determine the speed and severity of the formation of alcoholism. These include: the age of onset of alcohol abuse (the onset of the disease), the age of occurrence of AAS, the age of change in the nature of intoxication. These properties are closely related and, perhaps, the rate at which they appear determines the intensity of alcohol dependence. None of the signs characterizing personality traits, Affective Disorders, education, environmental conditions, social status, etc. are included in the first factor. This suggests a slight dependence of the progredience of the disease on these indicators. The second factor (table. 6) combined the manifestation of various affective disorders (depression, anxiety, irritability) and the manifestation of pathological attraction to alcohol destroyed by alcohol, as well as determining their close relationship. Thus, the analysis of factors identified the main signs that determine the speed and severity of the formation of alcoholism. It should be noted that the formation of addiction to alcoholism in patients with alcoholism is determined by factors that are not associated with characteristic and personal characteristics. The information presented on specific positions is A. S. Similar to the results of the analysis of factors obtained during the study as part of the candidate thesis devoted to the study of the recurrence of chronic alcoholism by Meliksetyan (2011). Patients were compared in terms of genetic risk levels. The average genetic risk was (<2) in 245 patients (52,8%), and high (>2) in 219 patients (47,2%). An assessment of alcohol consumption levels close to reliable levels when taken through the visual-analog scale (vash) showed an appetite for alcohol in patients at higher genetic risk than in patients with moderate genetic risk (p=0,060), which requires further investigation. Also, alcohol withdrawal syndrome in patients with a higher genetic risk is formed faster than in patients with moderate genetic risk (p=0,029). At the same time, patients with moderate severity (2±0,9) have higher genetic risk levels for developing surfactant dependence disorders than those with higher severity (15±0,86, p=0,024), which requires further investigation and may be due to incomplete patient weight data.
Conclusions. The presence of family weight and its high level accelerate the development and formation of alcohol dependence and are a risk factor for the development of this disease, regardless of gender. In the early stages of the disease, it is possible to predict the formation, development and severity of Alcohol Dependence by quantitative analysis of family weight and the genetic risk of the patient. Thus, when comparing patients with moderate to high levels of genetic risk, a significant difference in the age of COA formation was found: alcohol craving in patients with previously high genetic risk and in patients with high genetic risk. Thus, in the analysis of age and quality clinical indicators that characterize the formation and development of

alcohol dependence, differences between patients with different levels of family severity in drug disorders and different levels of genetic risk were identified. Weightless patients are drastically different from high-weight patients, and average-weight patients occupy an intermediate position between these groups. The data obtained in this study provides further evidence that, regardless of gender, the presence of family weight and its high levels accelerate the development and formation of alcohol dependence and are a risk factor for the development of this disease. In the early stages of the disease, it is possible to predict the formation, development and severity of Alcohol Dependence by quantitative analysis of the patient's family severity and genetic risk.

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