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Direct Effect of Comorbid Mental Disorders on The Clinical Course of Alcoholism

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ABSTRACT

Objective: *This study aims to investigate the direct effect of comorbid mental disorders on the clinical course of alcoholism, emphasizing the complexities involved in diagnosis, treatment, and rehabilitation.* ***Method:*** *A comprehensive analysis was conducted through a cross-sectional study involving patients diagnosed with alcohol use disorder (AUD) and co-occurring mental health conditions. Data were collected using standardized psychiatric assessments and clinical evaluations from both narcology and psychiatry specialists.* ***Results:*** *The findings reveal that the presence of comorbid mental disorders significantly exacerbates the severity and chronicity of alcoholism, leading to poorer treatment outcomes, increased relapse rates, and heightened resistance to standard therapeutic interventions. Patients with dual diagnoses exhibited more complex clinical profiles, necessitating integrated and multidisciplinary treatment approaches.* ***Novelty:*** *This study highlights the critical need for dual-specialist involvement in the management of AUD with comorbid mental disorders, offering new insights into integrated treatment frameworks that can enhance clinical outcomes and reduce the burden of relapse.*

INTRODUCTION

The high prevalence of alcohol dependence and the risk of serious medical and social consequences associated with alcohol abuse indicate a high and constant relevance to the study of this problem [1-3]. Thus, according to various authors, about one-fifth (25%) of patients with alcohol addiction and drug addiction detect procedural endogenous mental disorders, and 20-60% of patients with endogenous diseases abuse alcohol and drugs. Questioning the problem of "combining" drug disorders and other psychopathological disorders of the exogenous and endogenous spectrum, he studied the effects of "pathological soil" (the development of drug disorders is influenced not by difficulties in diagnosing and differential diagnosis of such patients, but by difficulties in their dispensary observation and, therefore, adequate therapeutic assistance [4-8].

Today, special dispensary accounts of patients in this group are not stored in either Narcological or psychoneurological dispensaries. With a sufficiently studied clinical part

of the problem of mental pathology in combination with alcohol dependence, it should be noted that the clinical features of secondary alcohol dependence are not sufficiently illuminated, especially in patients with schizophrenia, affective psychosis, some organic brain lesions, borderline neuropsychiatric disorders and post-traumatic stress disorders – the role of personality traits and personality disorders in real and symptomatic patients, as well as in patients with joint diseases that initiate alcohol and substance abuse [9-13].

The study of the onset and course of comorbid disorder in the studied context, its clinical features, aggressive and autoagressive behavior in patients with combined pathology, conditions for monitoring the dispensary is of great social importance for improving the quality of the organization of psychiatric and Drug care [14-19].

In the available literature, we have not found studies of a comparative nature that shed light on differences in sociodemographic and psychopathological characteristics in the conditions of traditional dispensary observation and active dispensary observation – in patients with combined pathologies prone to socially dangerous behavior. Thus, all of the above has become a good basis for conducting this study [20-24].

Alcoholism and affective disorders belong to the group of socially significant diseases, which are characterized by high prevalence and unfavorable medical and social consequences. One of the features of alcohol dependence is the frequent comorbidity with affective disorders. According to the results of epidemiological and clinical studies, there is a high level of comorbidity of affective disorders with alcohol dependence, which is 25-40%. According to data collected from 8 specialized medical institutions in European countries, among patients with alcohol dependence aged 18-60 years, affective disorders were detected in 43% of cases. In addition, there are many cases where patients with affective disorders consume alcohol to alleviate symptoms of depression and anxiety [25-28].

According to a number of researchers, when alcohol dependence and affective disorder are combined, the occurrence of each disease doubles the risk of developing the other. In turn, prolonged, repeated alcohol abuse contributes to the development of depressive episodes, severe anxiety, suicidal thoughts, and insomnia. The formation of comorbid pathology significantly worsens the clinical symptoms of the underlying disease, reduces the quality of life of patients, and complicates the therapeutic and diagnostic process. An additional difficulty is the choice of medications in the presence of comorbid pathology [29-31].

Along with many mental disorders, alcohol dependence and affective disorders are the result of the interaction of genetic and environmental factors, and are accompanied by morphofunctional brain disorders, including cognitive, emotional, and behavioral disorders. The disclosure of neurobiological aspects of the morbidity of alcohol dependence and affective disorders is very important, since knowledge of the relationships between the structural and functional parameters of the central nervous system (CNS) and clinical and dynamic features can help explain the pathogenesis of these disorders. This, in turn, may contribute to the identification of more effective methods for the diagnosis, treatment and prevention of comorbidity, alcohol dependence

and affective disorders. Technical limitations currently exclude direct in vivo analysis of cellular and molecular markers underlying the comorbidity of alcohol dependence and affective disorders in patients. However, other neurobiological aspects of the comorbidity of alcohol dependence and affective disorders, such as the electrical activity of the cortex, can be studied in the brain of a living person using non-invasive methods such as electroencephalography (EEG). The cerebral cortex plays a key role in behavior, as well as complex cognitive functions of the human brain, such as memory, attention, thinking, perception of the environment, etc. Many studies have investigated the relationship between resting EEG parameters and predisposition to psychopathology [32-35]. Previous studies using EEG have also shown that alcohol dependence and affective disorders may be associated with dysfunction of the large-scale cortical system, which includes a number of functionally related areas. However, to date, there are not enough studies based on EEG in patients with comorbidity of alcohol dependence and affective disorders in the literature, and their results are contradictory. EEG studies offering neurophysiological models of affective disorders and alcohol dependence are of great scientific interest in the modern world [36-38].

It is assumed that the main contribution to the development of both alcohol dependence and affective disorders is made by disorders of neuronal plasticity associated with neurodegeneration. One of the biomarkers of neuron destruction (neurodegeneration) is phosphorylated neurofilaments (pNFS) released from damaged axons and can be found in peripheral blood. The determination of biomarkers of neurodegeneration in blood serum in psychiatric and behavioral disorders would allow us to reach a new level of research on this problem [39-44]. Currently, the largest number of studies on the content of pNF in blood serum have been performed in groups of patients with neurodegenerative diseases such as Alzheimer's disease, Huntington's disease, Parkinson's disease, multiple sclerosis, etc., while an increased content of pNF in the blood serum of patients was clearly detected when compared with controls. These studies show a pronounced dynamics of pNF levels over time, as well as correlations with the severity of damage to the nervous system. Thus, today it is important to study the level of pNF as a marker of neurodegeneration in blood serum and in psychiatric disorders in order to clarify the pathogenetic features of diseases and the clinical prognosis [45-49].

At the same time, the interrelation of the parameters of the psychophysiological response with the clinical and dynamic features of comorbid pathology remains insufficiently studied. An integrative approach using various neurobiological technologies is important for further study of the involvement of various functional systems in the formation of comorbidity of alcohol dependence and affective disorder [50-59].

The purpose of the study. The direct effect of comorbid mental disorders on the clinical course of alcoholism is the study of clinical, psychopathological features.

RESEARCH METHOD

Research in 2023-2024, a clinical examination of 64 male patients was carried out at the Samarkand regional branch of the Republican specialized center for Scientific Applied Medicine of Narcology. Patients were on the account of the dispensary and were under the control of the regional branch of the Samarkand Regional Medical Center of Scientific Applied Medicine of the Repu blican specialized Narcology. Part of the patients (50%) were examined at the Samarkand Regional Psychiatric Hospital during inpatient treatment.

In accordance with the stated goal, we used clinical and psychopathological examination methods related to the psychiatric component of addiction and combined disorder. All patients under control underwent a standard comprehensive examination: EEG clinical-psychopathological, neurophysiological studies, premorbid assessment of personal qualities taking into account the age-related characteristics of the formation of psychopathies, depending on their genesis and the median age of the study group was 38,82±3,24 years.

For the study, patients were studied in two groups. 44 people (68,75%) with a core group of alcoholics and comorbid mental disorders and 20 (31,25%) with a control group were only studied with patients with alcohol addiction syndrome.

RESULTS AND DISCUSSION

In assessing the participation of Affective Disorders in the formation of the syndrome and their role in the development of combined pathology, it can be noted that in the clinical picture of the 22 (50%) joint disease studied, the predominance of Affective symptoms in the structure of complex mental disorders syndromes. Affective pathology, mainly depressive register, included more complex syndromes: astheno-depressive (4,0%), anxiety-depressive (8,0%), depressive-paranoid (6,0%), etc.

Electroencephalography (EEG). Randomly selected 30-second non-cartefact background segments and load samples were used in electroencephalograms to create maps, without explicit explosions and paroxysms, whose map was executed separately if possible. In addition to power Spectra, mapping was influenced by activity bursts, ratios of different frequency bands, amplitude values of flashes and paroxysms.

The background EEG is recorded in a relaxed wakefulness state. The test was conducted for 3 minutes of hyperventilation, eye opening, photostimulation, registration of EEG per minute of hyperventilation, followed by removal of the background EEG immediately after the hyperventilation test. The quality parameters of the activation reaction were evaluated-the degree of desynchronization and loss of basic activity, the severity of the EEG reaction to hyperventilation, as well as changes in EEG quality characteristics during and after hyperventilation.

The studied contingent of patients with combined pathology is a real "cross section" of individuals who are under the control of a dispensary and are observed during intensive alcohol consumption. From a nosological point of view, schizophrenia group

disorders and organic disorders are combined with alcohol addiction, to a lesser extent with patients with affective mood disorders and" pure " personality disorders.

It can be assumed that these combinations have not been noted (unnoticed) by employees due to low activity (openness), the privacy of depressed patients, and the focus on accounting If personality disorders and alcohol-dependent patients are traditionally taken into account.

In accordance with the goals and objectives of the study in the structure of comorbid pathology, we considered true alcohol dependence and symptomatic alcohol dependence as a component of a single comorbid disorder. True alcohol dependence (secondary true alcohol dependence) was diagnosed by us from 47 people (Group 1), symptomatic-from 14 people (Group 2). As for the psychiatric component of the combined disorder, Group 1 had more patients with organic brain damage (34,0%) and oligophobia (14,0%) than Group 2 ($p<0,05$), and Group 2 had a significant predominance of patients with schizophrenia (92,0%). they were more numerous than group 1 ($p<0,05$).

True alcohol addicts are more likely to have alcohol-dependent relatives ($p<0,05$), and the debut of mental illness has been found to be associated with prior intensive alcoholism ($p<0,05$). When describing real and symptomatic alcohol addiction, we did not take into account their dynamic relationship with one or another mental illness. Therefore, we proceeded to study the peculiarities of real and symptomatic dependence in patients with schizophrenia and organic brain damage – dominant nosologies in our contingent. Symptomatic dependence develops mainly against the background of the schizophrenia process, the dynamics of which correspond to the dynamics of endogenous disease, and the effect on the process of comorbid disorder is more ambiguous.

In half of patients who negatively affect the endogenous component of the concomitant disorder, the consumption of alcohol "for therapeutic reasons" is noted to relieve discomfort, mood swings, socialization, which in some cases helps to slow down the increase in defects and form a specific adaptation. In addition, relatively high rates of hereditary violence of alcohol dependence combined with schizophrenia for patients with alcohol dependence (25%) found no difference between the groups.

Just as alcohol withdrawal syndrome is not determined by the age of development – an indicator of physical dependence on alcohol, this can be explained by sufficiently high rates of symptomatic alcohol dependence in the group and a statistically significant increase in patients in the group who occasionally consume alcohol ($p<0,05$). In symptomatic alcoholism, alcohol withdrawal syndrome may not develop in 50% of people, as well as in patients who occasionally consume alcohol. However, these considerations describing the characteristics of a small part of the group contingent do not refute the conclusion that "alcoholism" in the group is younger and more dangerous.

CONCLUSION

Fundamental Finding: This study concludes that alcohol addiction frequently co-occurs with paroxysmal-progressive schizophrenia and exogenous-organic diseases,

with distinct impacts on the clinical course of each condition. In cases of premorbid exogenous-organic diseases, secondary true alcohol dependence exacerbates the underlying pathology, leading to increased disease severity, frequent exacerbations, and reduced remission periods. Conversely, in schizophrenia, secondary symptomatic alcohol addiction temporarily alleviates psychological discomfort, improves mood, facilitates social functioning, and delays the progression to a defective state. **Implication:** These findings underscore the necessity for integrated treatment approaches that address both alcohol dependence and comorbid psychiatric conditions to improve clinical outcomes and quality of life. **Limitation:** The study's limitations include a lack of longitudinal data to assess long-term outcomes and potential biases related to the heterogeneous sample population. **Future Research:** Future research should focus on longitudinal studies to explore the causal mechanisms underlying these comorbidities and evaluate the effectiveness of multidisciplinary interventions tailored to specific psychiatric and neurological profiles.

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