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To Reveal the Frequency of Anxiety-Depressive Disorders in Epilepsy

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Abstract: Epilepsy is at the crossroads of two specialties: neurology and psychiatry, since, being a chronic disease, it is characterized by a polymorphic clinical picture, which is a complex set of symptoms in which neurological manifestations are closely intertwined with mental and somatic disorders, occupying one of the leading places among those associated with epilepsy of mental disorders, lead to aggravation of the underlying disease, increase suicidal risk and reduce the quality of life of patients.

Keywords: Epilepsy, depression reduces, negative, neurophysiological features.

Epilepsy is a polyetiological disease characterized by polymorphism of clinical symptoms with a variety of neurobiological, neuropsychological, pathopsychological, and social manifestations. Worldwide, there is a high prevalence of this disease, which is 0.5-2%. Annually, 50-70 cases are recorded per 100,000 population. Important features of this disease include a combination of both psychotic and non-psychotic registers of disorders [1-3], various complaints, and multiple repeated requests for medical help. According to the available data from a number of studies [4-6], various factors contribute to the development of this disease: genetic, perinatal, environmental, personal. A large number of works are devoted to the study of psychological aspects in epilepsy [7-9]. Moreover, over the past years, in the structure of psychopathological disorders in epilepsy, there has been a decrease in the proportion of epileptic manifestations proper, with a simultaneous increase in the proportion of non-psychotic affective disorders, in particular, the depressive pole, which is a reflection of clinical pathomorphosis.

The prevalence of DR among patients with epilepsy is extremely high and, according to different authors, ranges from 10% to 55% (7). Despite the high incidence of DR, these disorders often remain unrecognized in 50% of patients with epilepsy (BE), due to both atypical manifestations and misdiagnosis (8). The presence of depression reduces the quality of life to a greater extent than the frequency and severity of epileptic seizures (6). Depression not only worsens the quality of life, but also negatively affects the dynamics of neurological symptoms during treatment (3). Depression claims the lives of about 1 million people annually due to suicide, and the incidence of suicide in combination with epilepsy of depression is 5-10 times higher than in the general population (4).

The problem of epilepsy remains at the center of attention of neuroscientists. This is due not only to the diversity of neurophysiological features of the disease, the versatility of the clinical picture, but also to various complications that develop against the background of regular use of antiepileptic drugs. Cognitive impairments, along with seizures, are among the main characteristics of patients with epilepsy [1-3, 6]. In this regard, there is an opinion that it is the cognitive defect that is one of the reasons for the violation of social adaptation and disability of such patients. In fact, as literature sources show, a history of more than 100 generalized tonic-clonic seizures in most cases leads to the development of cognitive impairment or pre-dementia disorders [4, 5, 9]. At the same time, attention disorders prevail in the structure of the cognitive defect. The situation is somewhat different in temporal lobe epilepsy with complex partial seizures. In this case, for the occurrence of a defect and dementia, it is not the number of seizures that matters, but the duration of the disease. So, according

to a number of authors, irreversible changes are detected after 5 years of continuous occurrence of complex partial seizures. At the same time, other sources indicate a longer period of 20 years [10, 11]. And in this case, the cognitive defect mainly concerns the function of memory. Based on these data, it can be concluded that cognitive disorders in epilepsy depend on many factors and differ in the polymorphism of clinical manifestations. Cognitive impairment in epilepsy, as a rule, manifests itself in the form of impaired memory, speech, attention, and thinking. As literature sources show, it is of scientific interest to study the relationship between cognitive impairments and personality and psychopathological characteristics of patients with different forms of epilepsy and different types of seizures [14, 15]. In addition, little has been studied about the effect of antiepileptic drugs on the aggravation of cognitive impairment, which is of great importance for clinical neurology.

The relevance of studying the clinical and psychological aspects of the functioning patterns of patients with epilepsy is determined not only by the fact that this disease is highly common among the entire group of neuropsychiatric diseases [10, 11], but also by the influence of the chronification of this disease on the social adaptation of patients, their system relationships in micro- and macrosociety [12, 13]. A comprehensive assessment of functioning disorders in patients with epilepsy reflects the particular importance of timely and targeted therapeutic and rehabilitation measures for this group of patients. The concept of "pattern" (eng. "pattern" - form, example) in this study, we consider as a form, a model of behavior of living individuals. The traditional notion that epilepsy is a chronic disease characterized by a gradual increase in severity, frequency of seizures, and personality changes has now been revised. So, along with severe cases of the course of the disease, quite favorable ones are noted. This principle was put by us as the basis for the division of patients into 2 groups: with favorable and unfavorable types of flow.

The purpose of the study was to study disorders of functioning patterns in patients with epilepsy, taking into account the types of the course of the disease.

Material and methods. The study was conducted from 2021 to 2022 on the basis of neurology of the Tashkent Medical Academy. The study included 216 patients, including 98 men, 118 women, aged 18 to 55 years, with various forms of epilepsy, in the structure of the disease which was dominated by simple, complex partial seizures, with disease duration up to 30 years. The study involved patients without severe cognitive impairment. Verification of the diagnosis in the examined patients was carried out on the basis of the results of clinical-neurological, psychopathological, pathopsychological, electroencephalographic examinations and data from computed tomography of the brain. In the study sample, able-bodied patients accounted for 55%, disabled - 45% of patients, group III disability had 56% of patients, group II - 44% of patients; the majority of patients had secondary specialized and secondary education (60 and 25% of patients, respectively). The study of disorders of the disease patterns was carried out using clinical-psychopathological, pathopsychological and statistical methods. The clinical and psychopathological method, in addition to the standard psychiatric examination, included an assessment of mental status using the SCL-90-R (Symptom Check List-90-Revised) clinical self-report scale. The following methods were used in the pathopsychological study: Hospital Anxiety and Depression Scale (HANDS), Beck Depression Scale (BDI). The clinical self-report scale (SCL-90-R) was developed by L. Derogatis et al. [14, 15]. Adaptation and validation of this technique was carried out at the Institute of Psychology of the Russian Academy of Sciences [16]. This technique reveals the levels of an unfavorable psychological state that occurs under the influence of various somatic symptoms in order to diagnose the psychosomatic status and, accordingly, reflects such indicators as true somatic manifestations and their psychological equivalents, various types of obsessive disorders (obsessive drives, obsessive fears, obsessive states), anxiety-depressive states, interpersonal sensitivity, aggressive manifestations, paranoid (paranoid) tendencies, psychotic disorders. A.S. Zigmond and R.P. Snaith introduced the Hospital Anxiety and Depression Scale (HANDS) in 1983 to diagnose the severity of depressive symptoms and the level of anxiety [17]. In 1961, the American psychiatrist A.T. Beck proposed the Beck Depression Scale (BDI) to determine indicators of the general level of depression, as well as on two subscales: cognitive-affective and somatic depressive manifestations [18].

Methods of statistical analysis. Cluster analysis was carried out using the k-means method to separate patients according to neurobiological, clinical, psychopathological, pathopsychological and social characteristics into homogeneous groups based on the values of a certain measure of similarity between objects. In this case, such hierarchical methods as the “near neighbor” method, the “far neighbor” method, the average connection method, and the centroid method were used. The final clustering took place using the k-means method, which implies the division of a set of objects into a predetermined number of clusters in order to minimize the sum of intraclass variances. The following values were used to describe the results: the median (Me), the values of the lower and upper quartiles (Q1 and Q3) were considered significant differences at $p < 0.05$ [19]. The practical implementation of the above methods was carried out using the statistical application package Statistica 10.0 [20].

Ethical aspect. The study included patients who gave and signed informed consent.

Results and discussion. As a result of this study, the result of clustering was the division of all patients into 2 clusters, taking into account the dependence of the indicators of the studied scales and clinical indicators of the disease. Cluster 1 included patients with a favorable type of disease course, disease duration less than 10 years (112 patients), cluster 2 - patients with an unfavorable type of disease course (104 patients).

Clinical and psychopathological patients with a favorable type of epilepsy course (cluster 1) corresponded mainly to neurotic level disorders in the form of affective lability with anxiety-phobic disorders occurring against an asthenic background, depressive disorders. Social characteristics of patients in cluster 1: the percentage of people who have lost their ability to work is the smallest - 14%, able-bodied - 86% of patients. The social status of persons who have retained their ability to work is as follows: workers - 44.2%, students - 22.8%, employees - 11.6%, temporarily unemployed for various reasons not related to health - 21.4% . The largest number of patients with higher education (12%) was noted in patients included in cluster 1.

Clinico-psychopathologically, in patients with an unfavorable type of epilepsy (cluster 2), pronounced cerebrasthenic disorders were dominant, combined with dysphoric, psychopathic and cognitive impairments. Social characteristics of patients in cluster 2: the percentage of people who have lost their ability to work, the most significant - 68%, able-bodied - 32% of patients. Among the able-bodied: workers - 19.5%, employees - 3.5%, temporarily unemployed - 9%. There were no significant differences in the level of secondary and incomplete secondary education between the clusters.

The study of disorders of functioning patterns in patients with epilepsy indicates their relationship with unfavorable and favorable types of the course of the disease. The results obtained show that patients with epilepsy, both with favorable and unfavorable types of the course of the disease, are characterized by increased rates on most of the studied scales, compared with normative data, while there are both intragroup and intergroup differences. A significantly significant ($p < 0.05$) relationship between indicators of depression, anxiety, somatization, paranoia (paranoid), obsessive fears (phobias), psychoticism and variants of the course of the disease is determined. The results obtained in the examination of patients on the SCL-90-R clinical self-report scale with a favorable type of disease course (cluster 1) and patients with an unfavorable type of epilepsy course (cluster 2) are shown in Table. 1. Given in table. 1, the data indicate that there are significant differences in the indicators of the following scales: somatization, depression, paranoia (paranoid), obsessive fears (phobias), psychoticism. With a favorable type of disease course (cluster 1), the indicator of somatization is pronounced, which reflects the manifestations of somatic disorders and complaints, as well as their mental equivalents from the side of the cardiovascular system, the musculoskeletal system, and the organs of the gastrointestinal tract. intestinal tract and other body systems; there is a pronounced indicator of depressive manifestations, which reflects the pathology of the emotional sphere of the psyche in the form of affective disorders. Depressive characteristics are combined with an indicator of anxiety, somatic and cognitive manifestations of anxiety in the form of attacks of nervousness, panic attacks. Indicators of paranoid (paranoid) disorders in the form of hostile behavior, suspicion towards other people, ongoing events in personal and social life, as well as obsessive manifestations

(phobias) in the form of various obsessive fears and psychoticism affected approximately the same, but are less dominant in a favorable type of course in comparison with an unfavorable type of course of epilepsy. In patients with an unfavorable type of the course of the disease (cluster 2), the most pronounced indicators are on the depression scale in the form of depression, dysphoria, suicidal tendencies, decreased mental activity with cognitive manifestations of depression; anxiety scale; somatization scale in the form of various somatic complaints from different organs and systems, phobias (obsessive fears) and psychoticism, which manifests itself in the predominance of an avoidant, isolated lifestyle.

Table 1. SCL-90-R Clinical Self-Report Scale Scores

Scale	Cluster 1			Cluster 2		
	Me	Q1	Q3	Me	Q1	Q3
SOM	9	4	11	7	2	9
O-C	2	1	7	2	1	8
INT	3	1	8	2	1	6
DEP	8	1	9	10	4	12
ANX	7	2	8	9	3	11
HOS	2	1	6	2	1	7
PHOB	4	2	6	6	4	8
PAR	3	1	5	4	2	6
PSY	3	1	6	4	2	8

Note: Scales: SOM - somatization; O-C - obsessive-compulsive disorders; INT - interpersonal sensitivity; DEP - depression; ANX - anxiety; HOS - hostility; PHOB - obsessive fears (phobias); PAR - paranoia (paranoia); PSY - psychoticism; Me - median; Q1, Q3 - values of the upper and lower quartiles.

Таблица 2. Показатели депрессии и тревожности

Scale	Cluster 1			Cluster 2		
	Me	Q1	Q3	Me	Q1	Q3
Depression (HANDS), points	4	2	6	8	6	11
Anxiety (HANDS), points	7	4	8	6	5	8
Somatic component depression (BDI), points	4	1	6	7	4	9
Cognitive component of depression (BDI), points	7	2	11	12	5	13
Total score (BDI), points	6	3	8	16	11	26

Note: Me - median; Q1, Q3 - values of the upper and lower quartiles.

The results of the study of indicators of anxiety and depression using the Hospital Anxiety and Depression Scale (HANDS), the Beck Depression Inventory (BDI) in patients with epilepsy with a favorable type of disease course (cluster 1) and patients with an unfavorable type of epilepsy course (cluster 2) are presented in table. 2. As can be seen from the data presented, the differences in the depression scale according to the Hospital Anxiety and Depression Scale (HANDS) are significant: depression, anxiety. According to the Beck Depression Scale (BDI) in patients with epilepsy, there are significant differences on the scales: the somatic component of depression, the cognitive component of depression, and the overall depression score.

According to the Hospital Anxiety and Depression Scale (HANDS) and the Beck Depression Scale (BDI), in the group of patients with an unfavorable type of the course of the disease (cluster 2), in contrast to patients with a favorable type of epilepsy (cluster 1), indicators of depression, which correlates with the indicators of these manifestations on the SCL-90-R clinical self-report scale. Both with a favorable type of the course of the disease and with an unfavorable type of epilepsy, the

somatic manifestations of a depressive disorder are less pronounced in the depressive component (leading symptoms: sleep disturbances, asthenia, loss of appetite, body weight, libido), and the cognitive component predominates. depression, representing a separate type of psychopathological disorders and including the following symptoms: pessimism, sadness, dissatisfaction with oneself, self-accusations, a sense of social disharmony.

Taking into account the revealed mutual influences of clinical and psychological characteristics of disorders of functioning patterns in epilepsy, the development and implementation of targeted psychocorrective, psychotherapeutic, psychosocial measures for this group of patients seem to be particularly relevant.

Conclusion

It is generally accepted that a favorable type of epilepsy course is characterized by a complete cessation of seizures, or the presence of periods of prolonged remissions during therapy, or a significant decrease in them, the absence of seizure polymorphism and pronounced mental disorders. An unfavorable type of course, on the contrary, is characterized by a progressive process, a high frequency of seizures, the absence of remissions, an increase in the polymorphism of seizures and pronounced mental disorders.

In the present study, an attempt was made to comprehensively assess the condition of patients, taking into account the indicators of clinical, psychopathological and pathopsychological studies, depending on the variants of the course of the disease. The results of the study made it possible to establish that for the studied group of patients with epilepsy, taking into account the favorable and unfavorable types of the course of the disease, heterogeneous clinical, psychopathological, pathopsychological and social characteristics are characteristic.

Literature

1. Dudra-Jastrzebska M et al. Mood disorders in patients with epilepsy, Pharmacological reports. 2007;59:369-378.
2. Jacoby A. Stigma, epilepsy, and quality of life, Epilepsy and Behavior, 2002;(3):10-20.
3. Derogatis LR, Lipman RS, Covi L et al. Neurotic symptom dimensions as perceived by psychiatrists and patients of various social classes. Arch. Gen. Psychiatr. 1971;24:454-464.
4. Hikmatovna N. Z. Optimization of treatment of early neurological complications in cardioembolic stroke //Middle European Scientific Bulletin. – 2021. – T. 8.
5. Hikmatovna B. Z., Zhalilovna H. D. Modern principles of management of patients with lower back pain //Biology and Integrative Medicine. – 2020. – №. 2. – C. 42.
6. Rahmatova, D. S. "Invention of a New Means" Aerodent" for the Primary Prevention of Dental Caries in Children." *Middle European scientific bulletin* 13 (2021).
7. Hikmatovna B. Z., Tukhtaeva K. K. Abu ali ibn sina about a healthy lifestyle //Academicia Globe: Inderscience Research. – 2021. – T. 2. – №. 6. – C. 380-383.
8. Derogatis LR, Cleary PA. Confirmation of the dimensional structure of the SCL-90: a study in construct validation. Clinical Psychol. 1977; 33: 981-989.
9. Praktikum po psihologii posttravmaticheskogo stressa. Pod red. NV Tarabrinai. Saint-Petersburg: Piter, 2001: 146-181. (In Russian)
10. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression scale. Acta Psychiatr. Scand. 1983;67:361-370.
11. Saidjonovna, Raxmatova Dilnora. "A method for improving the prevention of dental caries in children using the device "Aerodent" American Journal of Medicine and Medical sciences." Volume 10: 908-910.
12. Isroilovich A. E. et al. The Role And Importance Of Glioh Neurotrophical Factors In Early

- Diagnosis Of Parkinson Disease //Texas Journal of Medical Science. – 2022. – Т. 5. – С. 1-6.
13. Abdukodirov E. I. et al. Study of bioelectric activity of the brain in patients with neurosensorius deafness //Oriental Journal of Medicine and Pharmacology. – 2022. – Т. 2. – №. 05. – С. 10-19.
 14. Olimova N. I. Analysis of the somatic and reproductive history of women with genital inflammatory diseases due to hiv infection //Актуальные вопросы экспериментальной микробиологии: теория. – 2022. – Т. 1. – №. 2. – С. 30.
 15. Isroilovich A. E., Kodirovich K. N., Jumanazarovich M. R. Hereditary Diseases of the Nervous System, Their Prevalence and Epidemiological Status //Central Asian Journal of Medical and Natural Science. – 2022. – Т. 3. – №. 6. – С. 127-132.
 16. Beck AT et al. An Inventory for Measuring Depression. Archives of general psychology 1961;4:561-571.
 17. Mukhsinova L. A. et al. Cytokine Profile in Patients with Congenital Cleft Upper Lip and Palate //European Journal of Research Development and Sustainability. – Т. 2. – №. 4. – С. 91-93.
 18. Anvarovna M. L. Early Diagnosis of Pathologies at the Exit of Teeth in a Young Child and its Peculiarities //Central Asian Journal of Medical and Natural Science. – 2022. – Т. 3. – №. 5. – С. 286-289.
 19. Ахророва Ш. Б., Нуруллаев Н. Н. Специфические изменение нервной системы у пациентов с постковидным синдромом //Вестник Казахского Национального медицинского университета. – 2021. – №. 4. – С. 354-357.
 20. Akhrorova, PhD Shakhlo, and Nodira Akhmatova. "Features of psycho-emotional disorders in idiopathic neuropathy of the facial nerve in men and women." (2018).
 21. Akhrorova, P. S., & Akhmatova, N. (2018). Electroneuromyographic analysis of acute neuropathy of the facial nerve in the aspect of sexual dimorphism.
 22. Tailakova D. I., Khabibova N. N. Determination of the immunological status of the oral cavity of the child population with congenital lip and palate in the studied areas //European Journal of Molecular & Clinical Medicine. – 2020. – Т. 7. – №. 3. – С. 3023-3026.
 23. Ахророва, Ш. Б., Рахматова, С. Н., & Уринов, М. Б. (2016). Опыт лечения больных с невропатиями лицевого нерва с применением препарата Nucleo CMF forte. Вестник Совета молодых учёных и специалистов Челябинской области, 1(1 (12)), 20-23.