

Structure and Dynamics of Anxiety and Depressive Disorders in Patients with Epilepsy

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Abstract Epilepsy is one of the most common neuropsychiatric diseases. It should be noted, however, that modern scientific and practical studies aimed at students and doctors reflect only part of the problem of epilepsy (neurological, neurosurgical, psychiatric, neurophysiological), but do not give a holistic view of epilepsy as a complex, polymorphic disease. Despite the frequency of mental disorders in epilepsy, their place in the clinic and the dynamics of the disease have not yet been clarified. Recently, a new approach to studying the effect of the epileptic process on the functional state of the brain has begun to take shape, using 3 certain psychopathological disorders (anxiety, depressive, behavioral, ideational, communicative, etc.) that are caused by epileptic activity in the absence of epileptic seizures (V.A. Karlov, 2019; L.R. Zenkov et al., 2009, 2016, 2018; S.I. Shevelchinsky et al., 2019, 2020.) in connection with with the concept of "epileptic encephalopathy". However, psychiatrists practically do not take any part in discussing these problems.

Keywords Epileptic process, Anxiety disorders, Depression, Seizures, Panic disorders

1. The Purpose of the Study

The study of all anxiety and depressive mental disorders of non-psychotic level in patients with epilepsy and the identification of the main pathogenetic factors causing their occurrence with the establishment of prognostic significance for the course of the disease.

2. Research Tasks

1. To identify the prevalence of ictal and interictal non-psychotic "mental" disorders in patients with epilepsy;
2. To differentiate and systematize a variety of anxiety and depressive psychopathological manifestations in patients with epilepsy;
3. To identify the main pathogenic factors involved in the formation of anxiety and depressive disorders in patients with epilepsy;
4. To develop algorithms for providing assistance to epilepsy patients with non-psychotic affective disorders.

3. Research Materials

The research was conducted in the dispensary department

and day-patient hospital of the psychiatric hospital of Samarkand region during 2022-2023. A total of 144 patients with epilepsy, in whom depressive and anxiety disorders were determined by clinical and clinical-psychopathological methods. The study was carried out in the dispensary and full-time Departments of the Samarkand regional mental health hospital on the method of cellular selection. The study included 144 patients receiving treatment with epilepsy from 2022 to 2023. Respondents were identified by random selection and observed using retrospective and prospective methods. The nature of epilepsy has been clarified by clinical-psychopathological and psychometric examinations.

4. Research Methods

Clinical-psychopathological, clinical-typological, clinical-catamnestic, psychometric, experimental-psychological, clinical-genealogical, statistical methods were used in scientific research. To solve the tasks set, the clinical and epidemiological research method was used as the main one. Special attention was paid to the psychopathological analysis and to the data of the catamnestic examination. These methods were used to study the features of the course of the disease, to clarify the nature, structure, dynamics of epileptic mental disorders, correlations between different variants of mental paroxysms and to establish differentiated prognostic criteria for epilepsy occurring with mental disorders. In addition, all patients underwent electrophysiological examination aimed at clarifying the localization of epileptic foci in epilepsy with

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Received: Oct. 22, 2024; Accepted: Nov. 28, 2024; Published: Nov. 30, 2024

Published online at <http://journal.sapub.org/ajmms>

mental paroxysmal and permanent disorders. The work also used data from pathopsychological, neuropsychological, neuro-ophthalmological, otoneurological, neurorengenological, and neuroradiological studies in order to identify etiopathogenetic factors that are important for the occurrence of mental disorders in epilepsy. In assessing the nosological affiliation of the studied affective disorders, we used the ICD-10 criteria, namely, compliance with the signs of a depressive episode of mild (F32.0) and moderate severity (F32.1), mania without psychotic symptoms, cyclothymia (F34.0), dysthymia (F34.1), mixed anxiety and depressive disorder (F41.2).

5. Research Results

Using the continuous sampling method, 144 patients with mental disorders were identified from all patients with epilepsy who were under observation in the Urban Neuropsychiatric

Dispensary (812 people), which is 43%. Figure 1 shows all the varieties of interictal mental disorders identified by the method of continuous selection from all patients with epilepsy. Approximately the same proportion is occupied by patients with affective (18.9%), anxiety disorders (17.2%) and epileptic dementia (16%), and in very small numbers (taking into account the outpatient profile of the Urban Neuropsychiatric Dispensary) patients with epileptic psychoses (1%) and interstitial twilight obscurations (2%) were identified.

As shown in Figure 2, emotional lability (15.2%) and an explosive variant of dysphoria (12.6%) were more common among affective disorders in patients with epilepsy. Of the depressive disorders, hypochondriacal depressions (22,3%) and classic dreary depressions (20.2%) prevailed. Adynamic depressions (18.1%) and depressions with depersonalization disorders (10.3%) were less common. Maniform disorders were observed in only 1.3%.

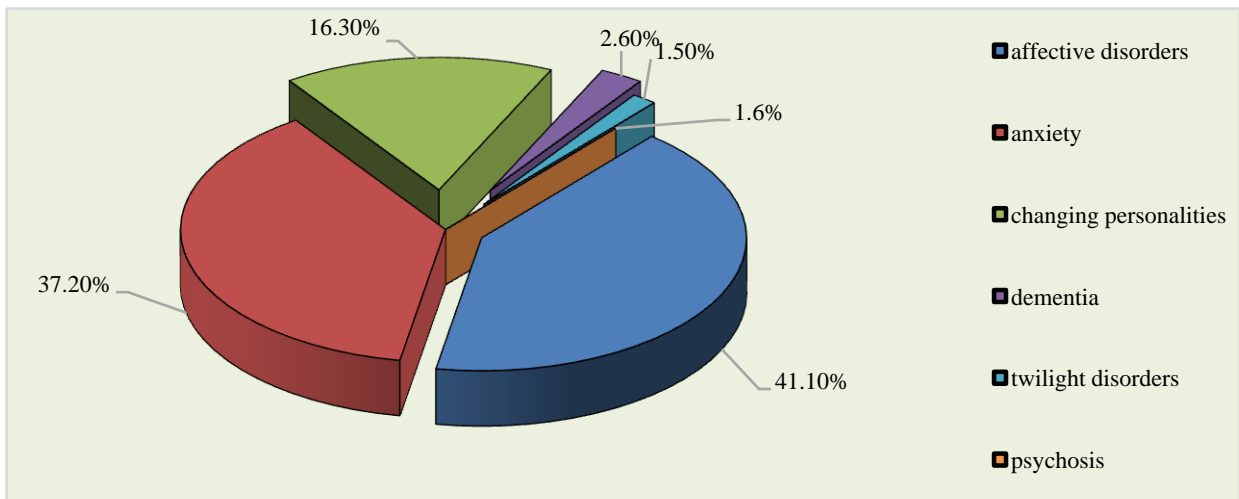


Figure 1. The structure of interictal mental disorders

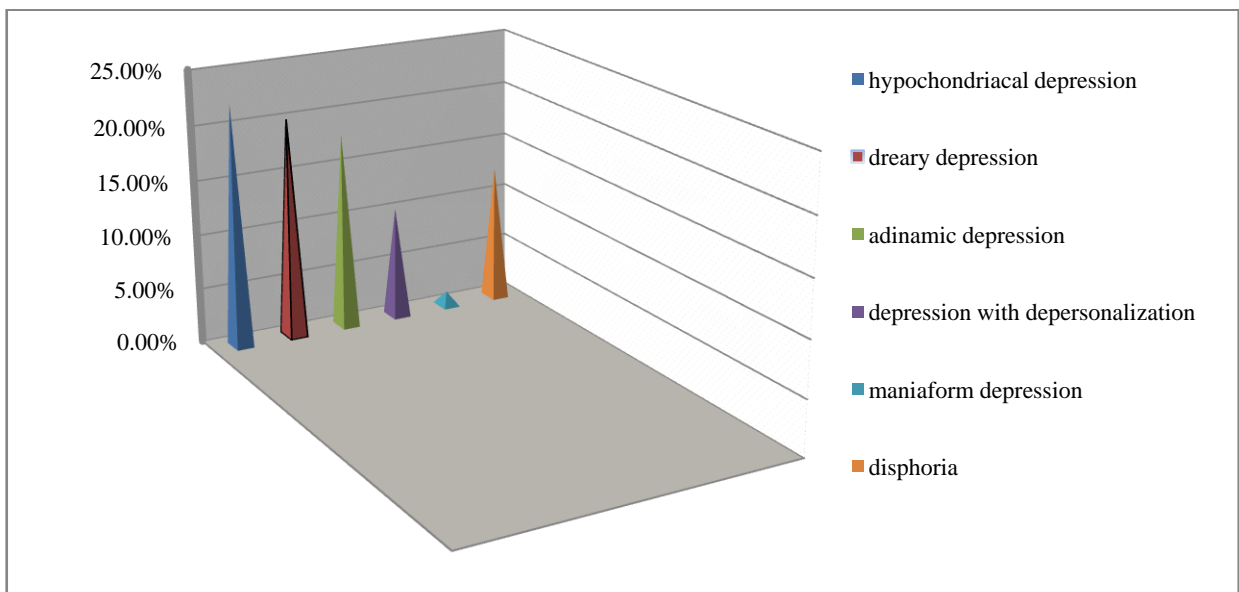


Figure 2. The structure of interictal affective disorders in patients with epilepsy

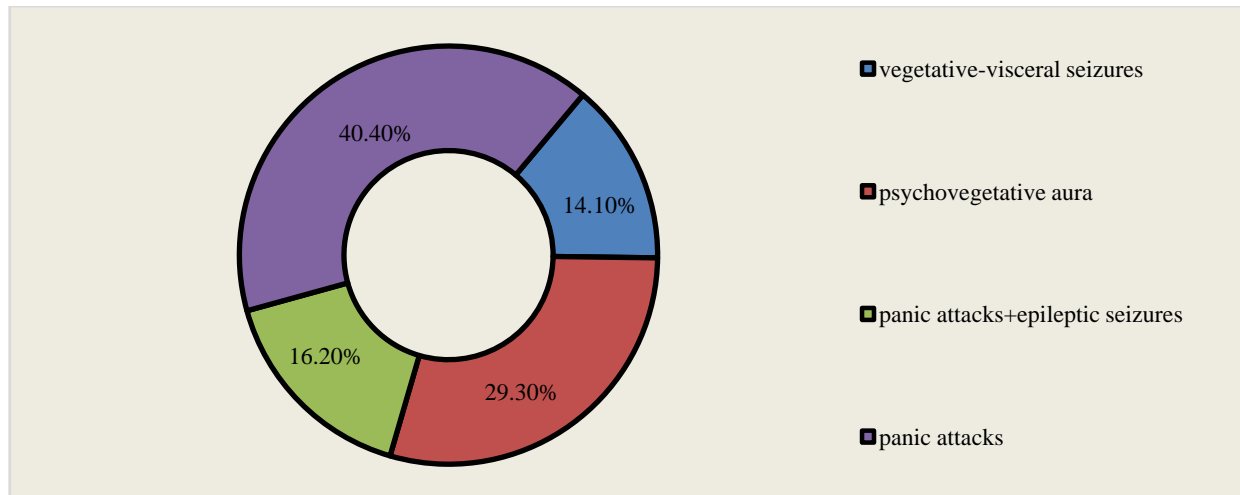


Figure 3. The structure of anxiety disorders in patients with epilepsy

Table 1. Distribution of pathogenic factors in patients with epilepsy with interictal affective disorders of non-psychotic level

Pathogenic factor	Group 1 (n = 84)	Group 2 (n = 60)
Hereditary burden	2 (5.2%)	5 (8.3%)
Birth injury	9 (15.2%)	20 (33.3%)
Postnatal traumatic brain injuries	26 (27.5%)	11 (18.4%)
Infectious damage to the central nervous system	21 (10.4%)	15 (25.0%)
Vascular lesion of the central nervous system	26 (21.6%)	5 (8.3.0%)
Endocrine and metabolic damage to the central nervous system	26 (10.6%)	3 (5.0%)
Absence of pathogenic hazards	26 (9.3%)	1 (1.7%)
Total	84 (100%)	60 (100%)

Table 2. The effectiveness of therapy for emotional-affective mental seizures in patients with epilepsy

Type of seizures	Cessation of seizures (remission for more than 6 months)		Significant reduction (reduction by more than 2/3)		Slight reduction (reductions of less than 2/3)		Without effect		Total	
	abs	%	abs	%	abs	%	abs	%	abs	%
Emotionally affective seizures	61	69,3	19	21,6	8	9,1	-	-	88	100

As shown in Figure 3, anxiety disorders in patients with epilepsy, unlike affective disorders, were exclusively paroxysmal in nature. They were most often found in the form of panic attacks (40.4%) that occurred during the remission of generalized tonic-clonic seizures in patients with epilepsy. In some patients (16.2%), panic attacks and generalized tonic-clonic seizures, although they occurred in isolation from each other, were interspersed and thus, we can talk about their mutual existence. And, Finally, in 14.1% of patients, anxiety disorders were observed within the framework of simple partial vegetative-visceral seizures, and in 29,3% of patients, anxiety disorders represented a psychovegetative aura of secondary generalized tonic-clonic seizures.

As Table 1 demonstrates, postnatal traumatic brain injuries ($p < 0.005$), as well as vascular ($p < 0.005$) and infectious ($p < 0.05$) damage to the central nervous system. Hereditary burden ($p < 0.001$) and birth trauma were significantly more common among patients in the control group; $p < 0.01$). No

significance was found in the predominance of endocrine-metabolic damage to the central nervous system in any of the groups. The number of patients with The absence of pathogenic hazards was approximately the same in both groups. In general, exogenous hazards were more common in patients of the main group (85.5%) than in the control group (75.6%), ($p < 0.001$).

We turn to the consideration of the effectiveness of therapy for emotional-affective mental seizures in patients with epilepsy. It should be emphasized that emotional-affective seizures respond well enough to antiepileptic therapy. In total, seizure cessation was detected in 69.3% of patients, a significant decrease in seizures occurred in 21.6% of patients, and a slight decrease in seizures occurred in 9.1% of cases ($p < 0.01$) (Table 2).

The use of antidepressants of selective serotonin reuptake inhibitors (sertraline, paroxetine and citalopram) for two months at average therapeutic doses in patients with epilepsy

with depressive disorders did not cause a statistically significant increase in seizures, but also contributed to a decrease in the severity of affective disorders. Remission of depressive symptoms was achieved in more than 50% of cases, which indicates the need for the use of antidepressants in patients with epilepsy with borderline affective disorders.

6. Conclusions

Interictal affective disorders of non-psychotic level in patients with epilepsy are represented by: emotional lability (15.2%), dysphoric depression (12.6%), dreary depression (20.2%), hypochondriac depression (22.3%), anxiety depression (8.5%), asthenic depression (7.3%), adynamic depression (18.1%). 10.3% of epilepsy patients have depression with depersonalization. Mixed conditions are observed in 5.3% of patients. Patients with hysterical depression account for 4.1%. Maniform disorders without psychotic symptoms occur in 3.8% of patients, depression with obsessions - in 2.9% of patients. Among the pathogenic factors in patients with epilepsy with interictal affective disorders of a non-psychotic level, postnatal traumatic brain injuries, vascular and infectious lesions of the central nervous system are more often observed. In most patients with epilepsy, simple partial affective mental seizures respond well to treatment with antiepileptic drugs. In total, seizure cessation is detected in 69.3% of patients, a significant decrease in seizures occurs in 21.6% of patients, and a slight decrease in seizures occurs in 9.1% of cases. The results of the study showed that most often remission of affective mental seizures is achieved in monotherapy with valproates, topiramate, oxcarbazepine and levetiracetam, as well as in combination with topiramate oxcarbazepine or valproates and when carbamazepine is combined with valproates.

REFERENCES

- [1] Cleary RA, Thompson PJ, Fox Z, Foong J. Predictors of psychiatric and seizure outcome following temporal lobe epilepsy surgery. *Epilepsia*. 2012; 53: 1705–1712. doi: 10.1111/j.1528-1167.2012.03604.x.
- [2] Devinsky O, Barr WB, Vickrey BG, Berg AT, Bazil CW, Pacia SV, et al. Changes in depression and anxiety after resective surgery for epilepsy. *Neurology*. 2005; 65: 1744–1749. doi: 10.1212/01.wnl.0000187114.71524.c3.
- [3] Ettinger A, Reed M, Cramer J Epilepsy Impact Project Group. Depression and comorbidity in community-based patients with epilepsy or asthma. *Neurology*. 2004; 63: 1008–1014. doi: 10.1212/01.wnl.0000138430.11829.61.
- [4] Fiest KM, Dykeman J, Patten SB, Wiebe S, Kaplan GG, Maxwell CJ, et al. Depression in epilepsy: a systematic review and meta-analysis. *Neurology*. 2013; 80(6): 590–9. doi: 10.1212/WNL.0b013e31827b1ae0.
- [5] Jacoby A, Baker GA, Steen N, Potts P, Chadwick DW. The clinical course of epilepsy and its psychosocial correlates: findings from a U.K. Community study. *Epilepsia*. 1996; 37: 148–161. doi: 10.1111/j.1528-1157.1996.tb00006.x.
- [6] Gaitatzis A, Trimble MR, Sander JW. The psychiatric comorbidity of epilepsy. *Acta Neurol Scand*. 2004; 110: 207–220. doi: 10.1111/j.1600-0404.2004.00324.x.
- [7] Kanner AM. Can neurobiological pathogenic mechanisms of depression facilitate the development of seizure disorders? *Lancet Neurol*. 2012; 11(12): 1093–102. doi: 10.1016/S1474-4422(12)70201-6.
- [8] Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*. 2005; 62: 617–627. doi: 10.1001/archpsyc.62.6.617.
- [9] Lim HW, Song HS, Hwang YH, Lee HW, Suh CK, Park SP, et al. Predictors of suicidal ideation in people with epilepsy living in Korea. *J Clin Neurol*. 2010; 6: 81–88. doi: 10.3988/jcn.2010.6.2.81.
- [10] Perini GI, Tosin C, Carraro C, Bernasconi G, Canevini MP, Canger R, et al. Interictal mood and personality disorders in temporal lobe epilepsy and juvenile myoclonic epilepsy. *J Neurol Neurosurg Psychiatry*. 1996; 61: 601–605. doi: 10.1136/jnnp.61.6.601.
- [11] Park SP. Depression in patients with newly diagnosed epilepsy predicts lamotrigine-induced rash: a short-term observational study. *Epilepsy Behav*. 2013; 28: 88–90. doi: 10.1016/j.yebeh.2013.03.028.
- [12] Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry*. 1993; 50: 85–94. doi: 10.1001/archpsyc.1993.01820140007001.
- [13] Ran L. et al. Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic // *Social Science & Medicine*. – 2020. – T. 262. – C. 113261.
- [14] Tellez-Zenteno JF, Patten SB, Jette N, Williams J, Wiebe S. Psychiatric comorbidity in epilepsy: a population-based analysis. *Epilepsia*. 2007; 48(12): 2336–44. doi: 10.1111/j.1528-1167.2007.01222.x.
- [15] Tolchin B, Hirsch LJ, LaFrance WC Jr. Neuropsychiatric aspects of epilepsy. *Psychiatr Clin North Am*. 2020; 43(2): 275–90. doi: 10.1016/j.psc.2020.02.002.