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NEGATIVE EFFECT OF EPILEPSY EQUIVALENTS ON THE QUALITY OF LIFE OF PATIENTS

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Abstract

The presence of cognitive impairment in patients with epilepsy, given the relationship with quality of life indicators, is of great importance for the choice of antiepileptic drugs. 66 patients with epilepsy were examined. A relationship was found between cognitive impairments and quality of life with the duration of the disease and the frequency of seizures. Assessment of cognitive impairments and the quality of life of patients in dynamics shows the effectiveness of antiepileptic drugs. When comparing carbamazepine and keppra, it was found that kepp has a beneficial effect on cognitive function and improves the quality of life of patients.

Keywords: epilepsy, quality of life, cognitive impairment, therapy, antiepileptic drugs.

Relevance

The problem of epilepsy is one of the most urgent in modern psychiatry. According to the International Antiepileptic League, about 65 million people in the world suffer from epilepsy [9, 10]. Epilepsy has a significant negative impact on all areas of the patient's functioning, reducing the quality of life [1, 7,8]. Epilepsy is a disease requiring long-term, long-term therapy, which is of fundamental importance for the patient's health and quality of life [2,3].

In modern epileptology, along with such traditional criteria as type, severity and frequency of seizures, quality of life (QOL) as an integral indicator of the entire existing complex of organizational, diagnostic and therapeutic measures, becomes central [4]. In connection with the expansion of ideas

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about the complex negative impact of epilepsy on the patient's quality of life, QOL is currently recognized as an important component of the treatment program for patients with epilepsy. Wagner et al. note that physical symptoms in patients with epilepsy are correlated with psychological distress and feelings of well-being. Suurmeijer et al. suggest that all the differences in the quality of life indicator can be explained by the influence of various psychosocial factors.

QOL is an integral characteristic of the patient's physical, psychological, emotional and social functioning, based on the subjective perception of the world. By improving the QOL indicators, the effectiveness of antiepileptic drugs can be assessed. Population studies by P. Kwan et al. (2004) showed that 30-40% of patients will not experience remission even with adequately selected therapy, but they can only significantly reduce the number of attacks [6,11].

One of the factors that improve the quality of treatment for patients with epilepsy is adherence to therapy. Compliance determines in patients who have been taking antiepileptic drugs for years, the stability of the achieved success in the treatment of epilepsy [13]. Low compliance to therapy leads to increased frequency of seizures up to the appearance of status epilepticus, increased traumatism, impaired higher mental functions, impaired social functioning and, ultimately, increased mortality [12]. According to a number of authors, the deterioration of QoL in patients with epilepsy is primarily associated with taking antiepileptic drugs that cause depression of cognitive functions, especially when using several drugs [5]. In the literature, the issues of the clinic and treatment of epilepsy in general are well covered, however, the issues of the impact of cognitive and emotional disorders on the quality of life, treatment taking into account the assessment of the quality of life have been studied not enough.

The purpose and objectives of the work is to determine the impact of cognitive impairments on the quality of life and to assess the effectiveness of antiepileptic drugs.

Research materials. During the period from 2018 to 2020, at the base of the Bukhara Regional Psychoneurological Dispensary, we examined 66 patients with the diagnosis "Organic emotional disorder due to epilepsy" who were ill for 5 to 10 years who were in inpatient treatment. The average age of the patients was 30.6 ± 15.4 years. Among the patients, 9.1% had higher, 54.5% specialized secondary, 28.8% complete secondary education and 7.6% - incomplete secondary education.

Research methods. Patients were divided into 2 groups. The first group included 66 patients (38 men and 28 women) with epilepsy. For each patient, a specially designed questionnaire was filled out, including 36 items on the patient's general history, the Hamilton scale for assessing depression. The follow-up period was 3 months. Primary examination included: collection of anamnesis, clinical examination of the patient, laboratory blood tests, EEG, scale assessment of the quality of life using the SF-36 questionnaire. At each follow-up visit, the patients were re-conducted: EEG study, scale assessment of quality of life using questionnaires SF-36, Hamilton depression rating scale. The SF-36 questionnaire is the most common quality of life questionnaire in clinical trials and individual monitoring. The SF-36 questionnaire consists of 36 questions that form 8 scales, its questions form two components of health: physical and psychological. After the test, the results of the QOL study using the SF-36 questionnaire are expressed in points from 0 to 100 on each of the eight scales. The higher the score on the SF-36 questionnaire scale, the better the QOL indicator. Statistical processing was carried out using standard statistics programs.

Research results and discussion.

The study of the dynamics of changes revealed that the QOL of patients with epilepsy is a systemic characteristic and depends on a number of clinical, psychoemotional and social factors. Follow-up observations show that in people with epilepsy, various psychosocial and non-medical problems are more common than in the general population. Common non-medical problems include feelings of stigma, psychological distress, unemployment, low self-esteem, and interpersonal problems, including low levels of social isolation and adjustment.

84.8% of patients feel stigma, fear and psychological distress about the possibility of the next attack. In 57.6% of patients, adaptation disorders, low self-esteem and decreased activity in daily life were found.

Table 1. Non-medical problems of patients with epilepsy

Non-medical problems	Main group (n = 66)		Control group (n = 22)	
	число	%	число	%
Feeling stigma	56	84,8	18	81,8
Psychological distress	54	81,8	17	77,2
Unemployment	48	72,7	19	86,3
Low self-esteem	44	66,7	16	72,7
Interpersonal problems	52	78,8	17	77,2
Adaptation disorders	38	57,6	15	68,2

72.7% of patients engaged in skilled work because of the problem of interpersonal relationships lost their jobs and they developed psychological distress. These non-medical problems of patients with epilepsy lead to a significant decrease in the quality of life of patients. The quality of life in epilepsy is associated with various psychosocial factors (health, family, interpersonal relationships, personal development, socioeconomic status, material well-being, social activity and social recognition). To assess the quality of life of patients, the study was carried out using the SF-36 questionnaire. In the control group, patients, taking into account the type of seizures and according to EEG data, were prescribed carbamazepine 200mg 3 times a day as monotherapy. In the main group, Keppra (levetiracetam) was prescribed 2 times a day. Studied the effect of duration of illness and epileptic seizures on sleep disturbances, anxiety levels and quality of life. A significant relationship was found between the duration of the disease and the frequency of epileptic seizures with sleep disturbance, daytime sleepiness, anxiety level, and quality of life. “Low” and “medium” estimates of the final QOL were obtained in patients with a disease duration of 5-6 years 7 (31.8%) and 12 (54.6%), respectively. In 3 (13.6%) patients, the indicators were located in the intervals of "good" QOL. No assessments of the "high" quality of life were obtained in any case.

In the group, the duration of the disease, which is 5-6 years, it was equal to 77.3 ± 2.4 points, corresponding to the "average" assessment of QOL; the average total QoL in the group of patients 7-8 years old was 61.8 ± 1.3 points, which corresponded to a "low" level of QoL. In patients with a disease duration of 9-10 years, the assessment of QOL is -56.9 ± 1.8 points - a level to the "low" level of QOL.

Table 2. Quality of life of patients with epilepsy during inpatient treatment

The quality of life	Control group (n = 22)	Duration of the disease 5-6 years (n = 22)		Duration of the disease 7-8 years (n = 26)		Duration of the disease 9-10 years old (n = 18)	
		Before treatment	After treatmen	Before treatment	After treatmen	Before treatment	After treatmen
General health	76,7±1,9	77,8±2,4	79,8±4,1	59,6±3,4	75,0±1,8**	55,9±5,2	60,0±1,8*
Physical activity	69,0±1,5	66,1±1,9	78,8±2,6*	65,6±4,2	74,8±1,3**	63,3±3,3	69,2±2,4*
Physical function	68,8±4,7	69,5±5,7	74,7±3,1*	52,3±4,1	56,5±3,4**	48,4±5,2	62,3±3,5*
Emotional Functioning	65,1±3,1	66,3±6,8	73,0±4,6*	56,2±4,8	65,8±3,4***	52,0±5,5	61,5±4,3*
Social functioning	68,4±2,3	68,5±2,6	72,4±2,9*	51,6±2,4	69,8±1,8**	49,5±2,8	65,9±1,9
Pain intensity	69,1±2,7	67,6±3,2	73,5±4,2*	48,4±4,2	59,8±3,0**	52,3±3,4	59,8±2,8*
Vital activity	63,8±2,9	65,7±2,6	78,9±2,3**	58,7±2,5	69,4±1,5**	51,1±2,7	59,1±1,4**
Mental health	61,0±3,3	62,9±3,8	77,3±2,4**	56,3±2,1	61,8±1,3**	49,3±3,1	56,9±1,8**

Note: significant compared to before treatment * - $P < 0.05$; ** - $P < 0.01$.

When assessing QOL indicators before treatment, it was found that in all groups the lowest QOL indicators were noted on the scales of general health status, physical activity, social functioning and functioning associated with an emotional state. On the scales of the intensity of pain and social functioning, the indicators were slightly higher in socially adapted patients, who were prescribed Keppra as monotherapy.

The data in Table 2 show that an average 4-week course of inpatient treatment significantly improves the QOL indicators of patients along the following axes: general health, physical activity, mental health, functioning associated with emotional state, emotional status and adaptation in society. These data fully coincide with clinical observations. In patients after 4 weeks of inpatient treatment, the psychological properties of the personality are significantly leveled, which is subjectively perceived by the patients, they feel calm, positive emotions increase, anxiety, feelings of pain and depression decrease.

Evaluation by patients of individual sub-spheres of their lives allows identifying the intact sub-spheres that carry the resource and support for overcoming the disease: "working capacity", "mobility", "the ability to perform daily work." More than half of the respondents, regardless of the severity of the disease, note the relative safety of working capacity and mobility, which largely determines the tendency of patients with epilepsy to social hyper-normativity.

Against the background of Keppra's therapy, according to the scales of the SF-Z6 questionnaire, a significant improvement in indicators in all axes was revealed after 1 month. After 2 months of therapy, QOL indicators in general improved significantly. In patients with a disease duration of 5-6 and 7-8 years, a significant increase in scores on the scales of role and emotional functioning, general and psychological health, vitality was noted, and in patients 9-10 years of age, the duration of the disease changes in QOL indicators were low and unreliable. Despite the significant positive dynamics of the QoL indicators of patients after hospital treatment, they remain significantly worse than the QoL in the population.

In the main group of patients receiving Keppra (n = 66) one month after the start of therapy, the absence of seizures was noted in 79%, in 21% of patients the therapy was effective. In dynamics, the number of patients with complete regression of seizures decreased, which is associated with a longer period of follow-up.

Our observations show that 34 patients who used keppra in a daily dose of 500 mg to 1500 mg showed good tolerability of this drug, and in 54.5% of cases led to an improvement in QoL and performance.

Table 3 Comparative efficacy of drugs on the 1st and 30th day.

Gruppa bolnyx	Do treatment						After treatment					
	Mild depression		Moderate depression		Severe depression		Mild depression		Moderate depression		Severe depression	
	Абс.	%	Абс.	%	Абс.	%	Абс.	%	Абс.	%	Абс.	%
Basic group	14	21,2	35	53,0	17	25,8	36	54,5	24	26,4	6	9,1
KEPPRA (n = 66)	6	27,3	12	54,5	4	18,2	17	77,2	2	9,1	3	13,6

Note: significant compared to before treatment * - P <0.05; ** - P <0.01.

When analyzing the data of the Hamilton Depression Questionnaire, signs of depression were revealed. In the main group, after treatment, severe and moderate depression was significantly reduced, and mild depression in 12 patients fully recovered.

In our study, the indicators of the level of anxiety and depression were 26.3 points. Before the start of therapy, the average indicator was 24.5 ± 5.3, after 1 month - 16.8 ± 6.3, after 3 months it decreased to 12.0 ± 4.2. Acceptance of pills had a positive effect on the emotional background of patients and the change in indicators was significant (p> 0.05).

Conclusion

As a result of the study, it was revealed that in many patients with epilepsy, a significant decrease in QoL indices caused by the disease was revealed. The QOL study is a quantitative technique that greatly simplifies the assessment of treatment results and makes them comparable.

The use of keppra in monotherapy increases QOL, reflecting overall health and emotional functioning. Cappra monotherapy can be used for a number of comorbidities because of the minor side effects associated with it. Keppra drug, when monotherapy, has a significant positive effect on QOL indicators - general health and vitality.

Keppra has certain advantages over basic antiepileptic drugs, affecting positively the following aspects of quality of life - physical functioning, emotional role functioning, general and psychological health. There was a good tolerance and a low frequency of side effects when prescribing keppra. The analysis revealed the efficacy of keppra, improving the quality of life of patients in dynamics made it possible to prescribe the drug for the treatment of patients with epilepsy.

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