ОСОБЕННОСТИ МОТИВАЦИОННОЙ И ЭМОЦИОНАЛЬНОЙ СФЕРЫ У ПАЦИЕНТОВ С ФОКАЛЬНОЙ ЛОБНОЙ И ВИСОЧНОЙ ЭПИЛЕПСИЕЙ

THE PECULARITIES OF MOTIVATIONAL AND EMOTIONAL SPHERE IN
PATIENTS WITH FOCAL FRONTAL AND TEMPORAL EPILEPSY

**МЕДВЕДЕВА Ю.И.,
ЗОРИН Р.А.,
ЖАДНОВ В.А.,
ЛАПКИН М.М.**

Рязанский государственный
медицинский университет
имени академика И.П. Павлова

**MEDVEDEVA YU.I.,
ZORIN R.A.,
ZHADNOV V.A.,
LAPKIN M.M.**

Ryazan State Medical University
named after academician I.P. Pavlov

Аннотация:

Значимость исследования мотивационных и эмоциональных особенностей у пациентов с фокальной лобной и височной эпилепсией определяется как влиянием эпилептического очага, так и психологической реакцией пациентов на системную организацию психических процессов. Целью работы являлось выявление особенностей структуры мотивов и эмоциональной сферы у больных фокальной лобной и височной эпилепсией.

Обследовано 50 пациентов с фокальной лобной эпилепсией и 50 пациентов с фокальной височной эпилепсией, сопоставимых по возрасту. Оценивалась частота приступов, показатели мотивационной сферы (при помощи теста Гербачевского), уровень тревожности и агрессии, качество жизни.

Выявлено достоверное преобладание фокальных приступов с нарушением сознания

Abstract:

The significance of the motivation and emotional sphere researches in patients with focal frontal and temporal epilepsy is determined by the epileptic foci influences and psychological reaction and their role in system organization of psychological processes. The purpose of the work is to identify the features of the structure of motives and the emotional sphere in patients with focal frontal and temporal epilepsy.

Fifty patients with frontal epilepsy and 50 patients with temporal epilepsy were observed. We assess the number of seizures, the motivational sphere, the level of anxiety, depression and aggressiveness. Quality of life was evaluated using SF-36 questionnaire.

We described statistically significant prevalence of focal seizure with consciousness disorders and automatisms and lower level of secondary generalized seizures in group of

и автоматизмами и меньшее число вторично-генерализованных приступов у больных височной эпилепсией. Описана специфика организации мотивационной сферы, более высокие показатели тревожности и агрессии у данных пациентов. При этом у пациентов с височной эпилепсией определялись более низкие показатели качества жизни. Предполагается, что особенности мотивационной и эмоциональной сферы у больных височной эпилепсией, отражают социально-биологический конфликт, который при недостаточности социального контура поведения реализуется в форме эпилептического приступа.

Ключевые слова:

лобная эпилепсия, височная эпилепсия, уровень тревожности, агрессия, качество жизни.

temporal lobe epilepsy. The specificity of motivation sphere, higher level of anxiety and aggression were revealed in this group of patients. The lower level of quality of life was described in the patients with temporal lobe epilepsy. We suggested, that peculiarities of emotional and motivation sphere in patients with temporal lobe epilepsy, reflect the social-biological conflict and the insufficiency of the social form of behavior may result in form of epileptic seizure.

Key words:

frontal epilepsy, temporal epilepsy, anxiety level, aggression, quality of life.

Relevance

Epilepsy is one of the most significant diseases not only in the medical, but also in the psychological aspect [1-3].

In modern medical research, an analysis of the disorders of higher mental functions in patients with epilepsy with different localization of the focus is carried out, but the data are mostly descriptive [4]. The differences revealed by clinicians are limited to determining the level of the intellectual-mnestic defect and the severity of characterological changes. Studies are mainly aimed at identifying the specifics of psycho-organic disorders associated with the damage of individual brain structures, and the mental changes that appear with the disease remain, as a rule, outside the scope of scientific interest. However, the study of psychological reactions that occur on the background of an epileptic process is of great importance for understanding the patterns of the brain's functioning and psyche in extreme conditions, which, of course, include the paroxysmal state. This is also necessary to identify the compensatory and adaptive capabilities of the mental sphere as a system that is far from equilibrium [4].

Focal frontal and temporal epilepsies are characterized not only by the presence of focal mental (cognitive – ILAE, 2017) seizures, but also by intractal mental disorders, determined by the function of the corresponding brain lobes.

The spectrum of mental disorders in epilepsy is extremely wide. As established during the examination of patients with temporal epilepsy, anxiety and depression

occur predominantly in left-sided foci, and such disorders as paranoia, psychopathic, schizophrenia-like, in right-sided [5]. According to some authors, schizophrenia-like disorders are not uncommon in epilepsy.

Severe memory disorders, which are observed in patients with temporal epilepsy, are usually absent in patients with frontal epilepsy [6]. Testing the predictal and postictal cognitive profile, M. Hernandez et al. [7] revealed no violations of verbal memory in patients with frontal epilepsy.

Paroxysmal (ictal) mental disorders are included in the structure of an epileptic seizure, are described as isolated phenomena, or develop as its final. Ictal mental disorders are diverse. However, the most frequent ictal manifestations are anxiety and depression. According to O. Devinsky (2004), in 54% of cases, depression is not recognized, and together with anxiety and sleep disorders significantly reduce the quality of life [1]. According to various studies among patients with temporal or frontal epilepsy, the prevalence of depression ranges from 19 to 65 percent. Functional changes in the limbic structures, which are often involved in epileptogenesis in temporal epilepsy, lie in the development of primary depression in epilepsy patients. Patients with temporal epilepsy most often develop depression. Both pathological conditions are associated with a reduction in the volume of the hippocampus, neuropathological changes in the amygdala and dysfunction of the hypothalamic-pituitary-adrenal axis. For example, in 2002, Keele N.B. et al., analyzing neuronal excitability in the amygdala, hypothesized that excessive hyper-excitability of amygdala neurons expresses epileptic activity; a "subepileptic" level of neuronal hyper-irritability may underlie pathological biological processes leading to the development of depressive and anxiety disorders [8].

At the same time, the analysis of the mechanisms of purposeful behavior in patients with epilepsy involves the study of the motivational sphere (structure of motives) and the emotional-affective sphere [9].

The aim of this work was to identify the features of the structure of motives and emotional sphere in patients with focal frontal and temporal epilepsy.

Materials and methods

The study included 100 people, of whom 50 patients with frontal epilepsy and 50 patients with temporal epilepsy. The average age was 33,1 (standard error of mean 1,39) in the group of patients with frontal epilepsy and 34,0 (standard error of mean) in the group of patients with temporal epilepsy. The study included patients with frontal and temporal epilepsy who have at least 1 seizure for 1 year and are able, after prior instruction, to carry out the examination protocol. The number of focal seizures with impaired consciousness and automatism (complex partial seizures) and focal seizures with a transition to bilateral tonic-clonic (secondary-generalized) were estimated according to 6 months of anamnesis and 6 months of subsequent follow-up

observation (after correction of therapy as necessary).

To assess the motivational sphere, was conducted a test by V.K. Gerbachevsky (determination of the achievements demand or a method of assessing the level of personal claims). The level of claim means the desire to achieve the goal that a person considers he/she is capable of [9]. The discrepancy between the claims and the real capabilities of a person can lead to an incorrect assessment with increased anxiety, emotional breakdowns, that is, the level of claims is closely associated with self-esteem of the person and the motivation to achieve success in various activities. To assess the level of anxiety, a survey was conducted on a J. Taylor scale in modification of V.G. Norakidze [10]. Similar conditions arise in a person as a result of a change in the conscious assessment of those around him and himself. Anxiety does not always act as a negative trait, in some life situations it allows you to cope with tasks better and more efficiently. People with a higher degree of anxiety perform their functions much more productively when they are praised for success. With a low rate, on the contrary – when they learn about their mistakes. The hospital anxiety and depression HADS scale was also used in the study [4]. Aggression was assessed as a psychological characteristic, reflecting both a stable ability to experience emotional states with a willingness to harm the environment, and the situational nature of these phenomena. Aggressive behavior was considered as an inadequate defensive response to stress factors, which is the opposite of adaptive behavior [11-13]. Indicators of aggression were assessed on two scales: 1) questionnaire of the condition, characteristics and orientation of anger STAXI is designed to determine the level of aggression, diagnosed aggression as a condition, as a trait, as a temperament, as a reaction, as well as auto-aggression, hetero-aggression and control of aggression; 2) The Buss-Durkee aggressiveness questionnaire (Buss-Durkee Hostility Inventory, abbr. BDHI) is designed to identify the level of respondents' aggressiveness. Additionally, the quality of life was assessed using scales of the SF-36 questionnaire, which reflects the general well-being and degree of satisfaction with those aspects of human activity that are affected by health [10].

For the descriptive characteristics of patient subgroups, the median (Me), upper (UQ) and lower quartile (LQ), mean value (M), standard error of the mean were used. For the pairwise comparison of samples, the non-parametric Mann-Whitney (U) criterion (adjusted for the multiplicity of comparisons) was used.

Results

In the group of patients with temporal epilepsy, a significantly greater number of focal seizures with impaired consciousness and automatisms (complex partial) (in the group of patients with temporal epilepsy 0.5, 0.3, 1.0; in the group of patients with frontal epilepsy 0.1; 0.05; 0.7; $Z=2.13$; $p=0.032$); and lower level of secondary generalized seizures (in the group of patients with temporal epilepsy 0.3; 0.05; 1.0; in

the group of patients with frontal epilepsy 0.8; 0.2; 2.0; $Z=-1.98$; $p=0.047$) were determined; the number of attacks decreased in both groups after correction of the therapy, no significant differences were found. The results of the Gerbachevsky test are presented in Table 1.

Table 1.

The characteristics of the structure of motives

Indicators	Patients with temporal lobe epilepsy (101)	Patients with frontal epilepsy (102)	Z	p
	Me; LQ; UQ	Me; LQ; UQ		
Avoid	12;10;14	13;11;14	-1.22	0.222
Level of mobilization	16;15;18	15;13;17	2.26	0.023
Regularity of results	15;13;17	14;12;15	1.93	0.048
Cognitive motive	18;17;19	17;15;18	1.95	0.047

The scores on the “Avoidance” scale are slightly higher in the group of patients with frontal epilepsy than in the group of patients with temporal epilepsy. The parameters on the scales “Level of mobilization of efforts”, “Regularity of results”, “Cognitive motive” were higher in the group of patients with temporal epilepsy. Moreover, the indicator “Cognitive motive” in the group with temporal epilepsy dominates over the indicators “Level of mobilization of efforts” and “Regularity of results” in the same group.

In Table 2 we presented the results of anxiety and depression level based on J. Taylor scale in modification by V.G. Norakidze and hospital anxiety and depression scale (HADS).

Table 2.

The characteristics of anxiety and depression

Characteristics	Patients with temporal lobe epilepsy	Patients frontal epilepsy	Z	P
	Me; LQ; UQ	Me; LQ; UQ		
Taylor Scale (in the modification of Norakidze)	20;14;27	15;11;24	1.50	0.131
HADS scale anxiety	7;4;8	5;3;7	1.97	0.039
HADS scale depression	4;3;7	5;2;8	0.07	0.994

HADS anxiety scores are higher in the group of patients with temporal epilepsy patients than in the group of patients with frontal epilepsy and are significantly significant.

The parameters of the STAXI autoaggression and Buss-Durkee autoaggression scale also turned out to be higher in the group of patients with temporal epilepsy than in the group of patients with frontal epilepsy (Table 3).

Table 3.

Indicators of aggression

Indicators	Patients with temporal lobe epilepsy (101)	Patients frontal epilepsy (102)	Z	P
	Me; LQ; UQ	Me; LQ; UQ		
Autoaggression STAXI	13;10;16	9;8;12	2.05	0.039
Autoaggression Bass-Darky	4;3;5	3;2;4	1.97	0.040

When studying the quality of life as a criterion for the level of social adaptation, a significantly higher level of impairment was found on the scale of physical functioning and role limitations associated with physical functioning in the group of patients with temporal epilepsy (Table 4).

Table 4.

The parameters of SF-36 questionnaire

Parameters	Patients with temporal lobe epilepsy	Patients with frontal epilepsy	Z	p
	Me; LQ; UQ	Me; LQ; UQ		
Scale “Physical functioning”	50;30;75	75;50;100	2.18	0.028
Scale “Role-Physical Functioning”	80;45;90	92;85;100	1.97	0.045

Discussion

The relationship of affective disorders in epilepsy with the localization of the pathological focus is discussed from the neurophysiological position, in particular, the temporal (mesiotemporal) localization of the epileptogenic focus and the secondary decrease in activity and dysfunction of the frontal lobes have a special role [14,15].

In the group of patients with temporal epilepsy, the peculiarities of the motivational sphere reflect the reserve of adaptation in patients with temporal epilepsy due to a more pronounced cognitive motive, the level of mobilization of psychological reserves and correspond to literary data [16,17].

The characteristics of anxiety and auto-aggression are also high in this group, which can be viewed as a pathological reaction. We suggested that in the absence of the implementation of the mobilized psychological resources in the behavioral sphere (violation of social adaptation in terms of quality of life), they can be realized in a regressive form in the form of an epileptic seizure [18].

Conclusions

1. The specificity of the motivational sphere reflect the preserved reserve of adaptation in patients with temporal epilepsy due to a more pronounced cognitive motive, the level of mobilization of psychological reserves.

2. At the same time, these features of the structure of motives are characterized

by an increase in anxiety and auto-aggression in patients with temporal epilepsy compared with frontal epilepsy.

3. A high level of auto-aggression in combination with a disorder of social adaptation in the group of patients with temporal epilepsy can be viewed as a pathological reaction that realizes the relationship between a violation of the social contour of behavior and the development of an epileptic seizure.

There is no conflict of interest.

СПИСОК ЛИТЕРАТУРЫ:

1. Карлов В.А. Эпилепсия у детей и взрослых женщин и мужчин: Руководство для врачей. М.: ОАО Издательство «Медицина»; 2010.
2. Громов С.А. Эпилепсия, изменение личности, лечение. СПб.: ИИЦ Балтика; 2006.
3. Mohammadi M.R., Ghanizadeh A., Davidian H. et al. Prevalence of epilepsy and comorbidity of psychiatric disorders in Iran // *Seizure*. 2006. № 15. P. 476-482.
4. Волов В.В. Исследование процессов самоорганизации в клинической психологии на примере функциональных систем, возникающих при эпилепсии. В сб.: Антропологическая психология в XXI веке: проблемы и перспективы. Материалы V Сибирского психологического форума. Самара; 2013. С. 53-57.
5. Биниауришвили Р.Г., Вейн А.М., Гафуров Б.Г., и др. Эпилепсия и функциональные состояния мозга. М.: Медицина; 1985. С. 14-16.
6. Петрухин А.С., Мухин К.Ю., Алиханов А.А. Эпилепсия: медико-социальные аспекты. М.; 2003. С. 43-64.
7. Hernandez M., Sauerwein H.C., Jambaque I. et al. Attention, memory, and behavioral adjustment in children with frontal lobe epilepsy // *Epilepsy Behavior*. 2003. Vol. 4, No 5. P. 522-536.
8. Воробьева О.В. Депрессия у пациентов, страдающих эпилепсией (особенности феноменологии, подходы к лечению) // *Лечение заболеваний нервной системы*. 2011. Т. 3, № 3(8). С. 9-16.
9. Kobau R., Gilliam F., Thurman D.J. Prevalence of self-reported epilepsy or seizure disorder and

REFERENCES:

1. Karlov V.A. *Epilepsiya u detej i vzroslyh zhenshchin i muzhchin: Rukovodstvo dlya vrachej*. Moscow: OAO Izdatel'stvo "Medicina"; 2010. (In Russ).
2. Gromov S.A. *Epilepsiya, izmenenie lichnosti, lechenie*. Saint Petersburg: IIC Baltika; 2006. (In Russ).
3. Mohammadi M.R., Ghanizadeh A., Davidian H. et al. Prevalence of epilepsy and comorbidity of psychiatric disorders in Iran. *Seizure*. 2006; 15: 476-482.
4. Volov V.V. Issledovanie processov samoorganizacii v klinicheskoy psihologii na primere funkcional'nyh sistem, vznikayushchih pri ehpilepsii. In: *Antropologicheskaya psihologiya v XXI veke: problemy i perspektivy. Sbornik materialov V Sibirskogo psihologicheskogo foruma*. Samara; 2013. P. 53-57. (In Russ).
5. Binaurishvili R.G., Vein A.M., Gafurov B., et al. *Epilepsy and Functional States of the Brain*. Moscow: Medicine; 1985. P. 14-16.
6. Petruhin A.S., Muhin K.Yu., Alihanov A.A. *Epilepsiya: mediko-social'nye aspekty*. Moscow; 2003. P. 43-64. (In Russ).
7. Hernandez M., Sauerwein H.C., Jambaque I. et al. Attention, memory, and behavioral adjustment in children with frontal lobe epilepsy. *Epilepsy Behavior*. 2003; 4(5): 522-536.
8. Vorob'eva O.V. *Depressiya u pacientov, stradayushchih ehpilepsiej (osobennosti fenomenologii, podhody k lecheniyu)*. *Lechenie zabolevanij nervnoj sistemy*. 2011; 3 (8): 9-16. (In Russ).
9. Kobau R., Gilliam F., Thurman D.J. Prevalence of self-reported epilepsy or seizure disorder and

its associations with self-reported depression and anxiety: results from the 2004 Health Styles Survey // *Epilepsia*. 2006. №47. P. 1915-1921.

10. Мантрова Н.Н. Методическое руководство по психофизиологической и психологической диагностике. Иваново: ООО «Нейрософт»; 2007.

11. Testa S.M. Оценка личности среди пациентов с психогенными припадками и больных эпилепсией // *Эпилепсия*. 2011. Т. 52, №8. С. 84-88.

12. Резапкина Г.В. Психология и выбор профессии: программа предпрофильной подготовки. М.: Генезис; 2006.

13. Quiske A., Helmstaedter C., Lux S. et al. Depression in patients with temporal lobe epilepsy is related to mesial temporal sclerosis // *Epilepsy Research*. 2000. №39. P. 121-125.

14. Мула М. Депрессия и эпилепсия: эпидемиологические и нейробиологические аспекты. В кн. Гусев Е.И., Гехт А.Б., ред. Современная эпилептология: проблемы и решения. М.: ООО «Буки-Веди»; 2015. С. 117-122.

15. Земляная А.А. Психические расстройства у больных эпилепсией юношеского возраста. Автореф. дисс. ... канд. мед. наук. Москва; 2006.

16. Miranda A.A., Zhadnov V.A. Psychological defense peculiarities in patients with brain tumor induced epilepsy // *Russian Open Medical Journal*. 2017. Vol. 6, No 1. DOI:10.15275/rusomj.2017.0105.

17. Кривцова А.Ю., Жаднов В.А., Ерхова Л.Н. Особенности психологического портрета больных эпилепсией с наличием и отсутствием группы инвалидности // *Личность в меняющемся мире: здоровье, адаптация, развитие: сетевой журн*. 2014. №3(6).

Доступно по ссылке:

<http://humjournal.rzgmu.ru/art&id=100>.

Ссылка активна на 15 июня 2016.

18. Зорин Р.А., Жаднов В.А., Лапкин М.М. Системные психолого-поведенческие характеристики у больных эпилепсией с различным течением заболевания // *Социальная и клиническая психиатрия*. 2016. Т. 26, №3. С. 31-37.

its associations with self-reported depression and anxiety: results from the 2004 Health Styles Survey. *Epilepsia*. 2006; 47: 1915- 1921.

10. Mantrova NN. *Metodicheskoe rukovodstvo po psihofiziologicheskoy i psihologicheskoy diagnostike*. Ivanovo: ООО «Nejrosoft»; 2007. (In Russ).

11. Testa SM. Ocenka lichnosti sredi pacientov s psihogennymi pripadkami I bol'nyh ehpilepsiej. *Epilepsiya*. 2011; 52 (8): 84-88. (In Russ).

12. Rezapkina GV. Psihologiya i vybor professii: programma predprofil'noj podgotovki. Moscow: Genезis; 2006. (In Russ).

13. Quiske A., Helmstaedter C., Lux S. et al. Depression in patients with temporal lobe epilepsy is related to mesial temporal sclerosis. *Epilepsy Research*. 2000; 39: 121-125.

14. Mula M. *Depressiya i epilepsiya: ehpidemiologicheskije i nejrobiologicheskije aspekty*. In: Gusev E.I., Gekht A.B. editors. *Sovremennaya ehpileptologiya: problemy i resheniya*. Moscow: ООО «Buki-Vedi»; 2015. P. 117-122. (In Russ).

15. Zemlyanaya AA. *Psihicheskie rasstrojstva u bol'nyh ehpilepsiej yunosheskogo vozrasta* [dissertation]. Moscow; 2006. (In Russ).

16. Miranda AA., Zhadnov VA. Psychological defense peculiarities in patients with brain tumor induced epilepsy. *Russian Open Medical Journal*. 2017; 6(1). DOI:10.15275/rusomj.2017.0105.

17. Krivcova Ayu., Zhadnov VA., Erhova LN. Osobennosti psihologicheskogo portreta bol'nyh ehpilepsiej s nalichiem i otsutstviem gruppy invalidnosti. *Personaluty in a changing world: health, adaptation, development: a network journ*. 2014; 3(6). Available at:

<http://humjournal.rzgmu.ru/art&id=100>.

Accessed: 15 June 2019.

18. Zorin R.A., Zhadnov V.A., Lapkin M.M. Sistemnye psihologo-povedenchiskije harakteristiki u bol'nyh ehpilepsiej s razlichnym techeniem zabolevaniya. *Social'naya i klinicheskaya psihiatriya*. 2016; 26(3): 31-37. (In Russ).

СВЕДЕНИЯ ОБ АВТОРАХ:

Медведева Юлия Игоревна – очный аспирант кафедры неврологии и нейрохирургии Рязанского государственного медицинского университета имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольтная, д. 9. e-mail: medvedeva_julia89@mail.ru

Зорин Роман Александрович – доктор медицинских наук, доцент кафедры неврологии и нейрохирургии Рязанского государственного медицинского университета имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольтная, д. 9.

Жаднов Владимир Алексеевич – доктор медицинских наук, профессор, заведующий кафедрой неврологии и нейрохирургии Рязанского государственного медицинского университета имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольтная, д. 9.

Лапкин Михаил Михайлович – доктор медицинских наук, профессор, заведующий кафедрой нормальной физиологии с курсом психофизиологии Рязанского государственного медицинского университета имени академика И.П. Павлова; 390026, Рязань, ул. Высоковольтная, д. 9.

ДАТА ПОСТУПЛЕНИЯ: 31.03.2019

ДАТА ПРИНЯТИЯ В ПЕЧАТЬ: 15.06.2019

ССЫЛКА ДЛЯ ЦИТИРОВАНИЯ:

Медведева Ю.И., Зорин Р.А., Жаднов В.А., Лапкин М.М. Особенности мотивационной и эмоциональной сферы у пациентов с фокальной лобной и височной эпилепсией // Личность в меняющемся мире: здоровье, адаптация, развитие: сетевой журн. 2019. Т.7, № 2 (25). Доступно по ссылке: <http://humjournal.rzgmu.ru/art&id=379> Ссылка активна на чч.мм.гггг. doi: 10.23888/humJ20192379-389

INFORMATION ABOUT AUTHORS:

Medvedeva Yu.I. – post-graduate student of the Department of Neurology and Neurosurgery at the Ryazan State Medical University named after academician I.P. Pavlov; 390026, Ryazan, 9 Vysokovolttnaya str.. e-mail: medvedeva_julia89@mail.ru

Zorin R.A. – MD, Associate Professor of the Department of Neurology and Neurosurgery at the Ryazan State Medical University named after academician I.P. Pavlov; 390026, Ryazan, 9 Vysokovolttnaya str.

Zhadnov V.A. – MD, Professor, Head of the Department of Neurology and Neurosurgery at the Ryazan State Medical University named after academician I.P. Pavlov; 390026, Ryazan, 9 Vysokovolttnaya str.

Lapkin M.M. – MD, Professor, head of the department of normal physiology with the course of psychophysiology at the Ryazan State Medical University named after academician I.P. Pavlov; 390026, Ryazan, 9 Vysokovolttnaya str.

PAPER RECEIVED: 31.03.2019

PAPER ACCEPTED: 15.06.2019

REFERENCE FOR CITING:

Medvedeva Yu.I., Zorin R.A., Zhadnov V.A., Lapkin M.M. The peculiarities of motivational and emotional sphere in patients with focal frontal and temporal epilepsy. Personality in a changing world: health, adaptation, development: a network journ. 2019; 7 (2). Available at: <http://humjournal.rzgmu.ru/art&id=379> Accessed: dd Month yyyy. doi: 10.23888/humJ20192379-389