SMU
Sikkim Manipal University
Manipal
INSPIRED BY LIFE
SMU Medical Journal
I2OR
SIS Scientific Indexing Services
ISSN : 2349 – 1604 (Volume – 3, No. 2, July 2016) Research article
Indexed in SIS (USA), ASI (Germany), I2OR & i-Scholar (India) and SJIF (Morocco) databases. Impact Factor: 3.835 (SJIF)

Comparative description of psycho-emotional state of the parents bringing up the children with chronic neurologic pathology

Leanid Shalkevich and Alisa Kudlach

Belarusian Medical Academy of Post-Graduate Education, Republic of Belarus, Minsk

*Corresponding author: Leanid Shalkevich
Phone: +375 29 754 09 54

Manuscript received : 11.04.2016
Manuscript accepted: 19.05.2016

Abstract

Research and comparative analysis of psycho-emotional state of parents of the children with chronic neurologic pathology. Level of psycho-emotional state has been studied in the 23 parents who have the children with epilepsy (research group, RG). Comparison group (CG) was made up of the 19 parents who have the children with cerebral palsy. Parameters of psycho-emotional state parents have been evaluated by performing psychological testing with the help of WAM (wellness, activity, mood) questionnaire and the Zung self-evaluation depression scale. Average points by the WAM questionnaire was 134 (Me 140, σ 30.38, m 6.33) in RG and 155.3 (Me 165,

σ 28, m 6.41) in CG. The difference for groups was l 21.3 points ($p<0.05$). According to scales of wellness, activity and mood the average points in groups were 44.7 (Me 45, σ 8,83, m 1.84) and 52.8 (Me 56, σ 10.81, m 2.48) (points difference 8.1 ($p<0.05$), 44.6 (Me 45, σ 10.55, m 2.2) and 46.2 (Me 43, σ 11.61, m 2.66) (points difference is statistically uncertain) and 44.3 (Me 45, σ 13.49, m 2.81) and 56.2 (Me 61, σ 10, m 2.29) (points difference 11.9 ($p<0.05$) correspondingly. Odds ratio of developing low and middle level of wellbeing and mood when comparing RG and CG makes 3.918 (confidence interval (CI) 1.081-14.200) and 2.545 (CI 0.827-7.835) correspondingly ($p<0,05$). Average points according to the Zung scale made 41 (Me 38, σ 9.16, m 1.9) in RG and 36.7 (Me 37, σ 6.18, m 1.42) in CG. Psycho-emotional state of parents of the children with epilepsy undergoes some higher grade disorders as compared to those of parents of the children with CP.

Keywords: epilepsy, cerebral palsy, children, parents, psycho-emotional state, life quality

Introduction

Epilepsy is a chronic brain disorder characterized by repeated unprovoked episodes of motor, sensor, intellectual, or psychic functions disorder. According to epidemiologic research, distribution of epilepsy makes 5-10 cases per 1000 persons. In childhood epilepsy, it is often malignant with developing psychopathological symptoms and psychic developmental delays. On the other hand, in childhood absolutely benign forms of the disease which end up in full recovery can exist. Postponed forms of the disease when the seizures which started in infancy are suddenly stopped to reappear much later are possible in children [1].

Cerebral palsy (CP) is the clinical term which unites a group of chronic non-progressive complexes of the motor disorder symptoms which are secondary in relation to brain damages and/or the abnormalities which appear in a perinatal period. CP sickness rate is estimated in the amount of 2 cases per 1000 newborns [2].

Studies show that parents of the children with psychophysical development disorders

have certain personality traits irrespective of the type of pathology. Depressions, neurotic and psychopathic reactions, distortion of parental settings and attitude to child, all this constitutes a breach of adaptation to the existing situation caused by the fact that there is a child with chronic neurologic or psychoneurologic pathology in the family. A complex of psychic, speech, sensory, and emotional-personal disorders can serve as the main psychically traumatizing factor which defines the character of personal sufferings of the parents bringing up such children. The above is also true in the case of CP and the motor disorders which characterize a combination of their psychophysical development peculiarities. Intensity of disorders, their resistance, duration, and irreversibility in this case has an unconditional impact on the depth of sufferings of sick children's parents. Psychic trauma of parents caused by developmental disorders in a child is deeper in the case when they themselves are psychically healthy and do not have psychophysical abnormalities [3, 4, 5].

Thus, in the doctor-patient link, the third doctor-patient-parent link is added in the course of the treatment of the children with chronic neurologic pathology. This third link requires more detailed attention to the psychological status of parents. Not knowing the distinctive features of psycho-emotional state of parents, it is impossible to achieve maximum effectiveness of the therapy and the rehabilitation treatment performed on children.

In view of the above, defining psycho-emotional state of parents of the children with chronic neurologic pathology, revealing the most acute intrafamilial psycho-social problems of this group of patients, developing the tactics of an active treatment and rehabilitation aid to the children with such pathology on the basis of the analysis of the acquired data allow neutralizing the negative consequences of the sickness to the maximum extent possible and raising the quality of children's lives.

Objective

To learn psycho-emotional state of parents of the children with chronic neurological

pathology (epilepsy and CP) and to make a comparative analysis of parameters of psycho-emotional state of parents in the indicated group of study.

Materials and methods

We studied psycho-emotional state of 23 parents of the children with epilepsy (average age is 30.34 years). The control group was made up of 19 parents of the children with CP without symptomatic seizures in the structure of pathology (average age is 34.35 years). Families were comparable in terms of the number of family members, age of parents and children, and social and economic state.

Parameters of psycho-emotional state of parents have been evaluated through psychological testing with the help of the WAM questionnaire (wellbeing, activity, mood) and the Zung self-rating depression scale.

WAM test is a type of states and moods questionnaires. It has been worked out by the members of 1st Moscow Medical Institute named after I.M.Sechenov – V.A. Doskin, N.A. Lavrent'eva, M.P. Miroshnikov, V.B. Sharay in 1973 [6]. A person's self-evaluation is one of the most important sources of information regarding their state, character of impact of the existing situation, and motivation of actions. It is part of the survey system for the persons under research as a component of psychological, sociological, and psycho-diagnostic studies. WAM became widespread in estimating psycho-emotional state of sick and healthy people, psycho-emotional reaction on the burden for the purposes of revealing individual peculiarities and biologic rhythms of psycho-physiologic functions. The questionnaire consists of 30 pairs of the opposite characteristics which the examinee is asked to use to estimate their state. Each pair is a scale on which the examinee marks the severity particular characteristics of their state. During the count, the extreme severity rate of the negative pole of the pair is considered as 1 point, and the extreme severity rate of the positive pole of pair is considered as 7 points. At the same time, it should be considered that the scale poles constantly change, but the positive changes always

get high points, whereas negative get low points. The points received are grouped into three categories in accordance with the key. The amount of points in each of them is counted. The sum received from each scale is within the range of 10 to 70 and allows revealing functional state of a person at this particular moment in time according to the following principle: < 30 points — low grade; 30 — 50 points — middle grade; > 50 points — high grade.

The Zung self-rating depression scale was published in 1965 in the Great Britain and subsequently gained international recognition. It has been translated into 30 languages [7, 8]. It is based on the diagnostic criteria for depression and results of a survey of the patients with such disorder. According to the scale, the depression severity is assessed on the basis of a self-esteem test of a patient. The scale consists of 20 questions. The person answers each of them according to the frequency of particular symptoms suffered. The answers imply ranging in the four following gradations: "extremely rarely", "rarely", "often," and "most of the time or constantly". When analyzing the results, the assessment is held according to the seven factors which contain group of symptoms reflecting the feeling of emptiness of the soul, mood swings, general somatic and specific somatic symptoms, psychomotor disorder symptoms, suicidal thoughts and irritability/ indecision [9].

Results

According to the data received after testing of examinees under the WAM questionnaire, the average amount of points was 134 (Me 140, σ 30,38, m 6,33) for parents of the children with epilepsy and 155.3 (Me 165, σ 28, m 6,41) for parents of the children with CP. Thus, the difference for research groups amounted to 21.3 points ($p<0.05$).

The data received after analyzing the wellbeing, activity, and mood scales of WAM questionnaire in the research groups are presented in TABLE-1.

Table (1): Average points of wellbeing, activity and mood in research groups during evaluation of psychic and emotional state using WAM inquirer

	Wellbeing	Activity	Mood
Parents of children with epilepsy	44,7 (Me 45, σ 8.83, m 1.84)	44,6 (Me 45, σ 10.55, m 2.2)	44,3 (Me 45, σ 13.49, m 2.81)
Parents of children with CP	52,8 (Me 56, σ 10.81, m 2.48)	46,2 (Me 43, σ 11.61, m 2.66)	56,2 (Me 61, σ 10, m 2.29)

As it can be seen from the data received, there is practically no difference between research groups in terms of comparison of average grades by activity scale. Comparing average grade by scales of wellbeing and mood allows getting the difference in 8.1 points and 11.9 points correspondingly ($p<0,05$).

Analysis of the data received after grading into low, middle, and high level of scales of the results received using the WAM questionnaire in both research groups, showed the following results (TABLES-2, 3).

Table (2): Data of WAM inquirer in the group of parents of children with epilepsy

Scales	Low grade <30	Middle grade 30-50	High grade >50	Low/Middle grade <50
Wellbeing	8,7% (2)	60,9% (14)	30,4% (7)	69,6% (16)
Activity	17,4% (4)	47,8% (11)	34,8% (8)	65,2% (15)
Mood	17,4% (4)	43,8% (10)	38,8% (9)	60,9% (14)

Table (3): Data of WAM inquirer in the group of parents of children with CP

Scales	Low grade <30	Middle grade 30-50	High grade >50	Low/Middle grade <50
Wellbeing	-	36,8% (7)	63,2% (12)	36,8% (7)
Activity	5,3% (1)	57,9% (11)	36,8% (7)	63,2% (12)
Mood	-	31,6% (6)	68,4 (13)	31,6% (6)

After further calculations, it was discovered that the odds ratio of developing of low or middle rate of wellbeing and mood comparing parents of the children with epilepsy to parents of the children with CP makes 3.918 (confidence interval 1.081-14.200) and 2.545 (confidence interval 0.827-7.835) correspondingly ($p<0,05$).

According to the data received after testing of examinees by the Zung self-test depression scale, most of examinees had normal grades (amount of points up to 49 inclusively). Light situation type depression (50-59 points) has been found in 17.4% (n=4) of parents of the children with epilepsy. The latter hadn't been found in parents of the children with CP. Nevertheless, by comparison of middle grades using the Zung scale, the difference between two research groups has been was found: average grade in the group of parents of the children with epilepsy made 41 (Me 38, σ 9,16, m 1,9), and in the group of parents of the children with CP it was 36.7 (Me 37, σ 6,18, m 1,42).

Discussion and Significance

Parents of the children with epilepsy have lower grade according to the WAM questionnaire as compared to parents of the children with CP. Also, they have lower points

according to wellbeing and mood scales. Besides, parents of the children with epilepsy showed higher chances to have middle or lower levels of wellbeing and mood, which indicates the decrease of psycho-physical state parameters in the given group of parents and, as a consequence, means higher probability of irrational psychic and emotional response to the family and domestic environment and decrease of motivation to perform daily routine, in particular with regard to a sick child. Parents of the children with epilepsy have higher points according to the Zung self-test depression scale as compared to parents of the children with CP. It may indirectly indicate more significant worsening of emotional state of the current group of parents and also about possible presence of depressive, anxiety feelings, and mental troubles, which unconditionally affects potential for treatment and rehabilitation of a child and influences the prognosis of their sickness.

Thus, we can insist that psycho-emotional state of parents of the children with epilepsy undergoes some higher grade disorders than that of parents of the children with CP. Such difference can be explained by definite clinical distinctions of the mentioned psychic and neurological pathologies, and, as a result, the difference in forming of means of crisis response – both at the level of separate family members and the family as a whole system. Epilepsy and CP are chronic neurological diseases. The first one manifests itself by paroxysm episodes, while the second one is permanent. The difference in achieved results – more expressed psychic and emotional disorders in parents of the children with epilepsy – can be explained by the fact that epilepsy has sufficient chances for reaching long-term remission in most of cases, while CP, despite of innovative rehabilitation technologies developed recently, does not have good perspective for full correction of existing motor abnormalities. As a result, there is much higher tension and exhaustion of psychic and emotional sphere in parents of the children with epilepsy due to the expectation of further perspective of the following course of sickness: whether it will be possible or not to stop seizures, while in the case with CP the perspective is unambiguous enough, though it is unfavorable. After going through realization that it is impossible to make a child with motor disorder absolutely healthy at the stage before being diagnosed with CP, such

parents may allow themselves to concentrate on achieving small but specified steps towards improving the state of their child afterwards, and the question whether or not their child will be healthy stops being a dominant one for them. The other possible factor which influences higher level of anxiety in parents of the children with epilepsyis expressed social stigmatizing of the children with epilepsy which is higher than that of the children with CP.

Since the family should be considered as a therapeutic and stabilizing factor which helps the child cope with harmful sufferings and correct their behavior, all the above-mentioned defines the necessity for psychological (psychotherapeutic) aid for the whole family of a sick child, especially in the case of such disease as childhood epilepsy. It is evident that a special course of psychological counseling and family psychotherapy for families with very sick children must be included into programs of training of psychologists and all specialists working with the children with chronic diseases.

References

[1] Shalkevich, L and Kot, D (2015) Patogeneticheskiy i elektron-klinicheskiy polimorfizm epilepsii: redkie i atipichnyie epilepticheskie sindromyi detskogo vozrasta. Minsk: BelMAPO, 350.

[2] Oskoui M, Coutinho F and J. Dykeman J (2013) An update on the prevalence of cerebral palsy: a systematic review and meta-analysis. Developmental medicine and child neurology. 55(6), 509–519.

[3] Ermakova E (2004) Psihologicheskoe konsultirovanie roditeley detey s hronicheskimi zabolevaniyami. Psihoterapiya i klinicheskaya psihologiya. 1.

[4] Tkacheva V (2019) Psihologicheskie osobennosti roditeley, imeyuschih detey s detskim tserebralnyim paralichom. Spetsialnaya psihologiya. 1.

[5] Venger A (1994) Struktura psihologicheskogo sindroma. Voprosyi psihologii. 4.

[6] Doskin V, Lavrent'eva N and Miroshnikov M (1973) Differentiated self-test of the functional state. Voprosy psikhologii. 6, 141-145.

[7] Zung WW (1965) A self-rating depression scale. Archives of General Psychiatry. 12, 63-70.

[8] Zung WW, Richards CB and Short MJ (1965) Self-rating depression scale in an outpatient clinic. Further validation of the SDS. Archives of General Psychiatry J. 13(6), 508-515.

[9] Thunder S, Snow M and Honts CR (2002) The Zung Self-Rating Depression Scale: convergent validity and diagnostic discrimination. Assessment. 9(4), 401-405.

Authors Column

Dr. Leanid Shalkevich MD, PhD, Associate professor, is a Head of Child Neurology Department at Belarusian Medical Academy of Postgraduate Education. The fields of his interest are pediatric neurology and epilepsy. He is also high quality experienced in electroencephalography (EEG) in children. He has more than 150 articles concerning child neurological disease in Belarussian, Russian and European science journals. Dr. Shalkevich is a Leader child neurologist of Belarusian Ministry of Public health, the 1st Vice-president of Belarusian League Against Epilepsy, member of Belarusian Society of Neurology and Neurosurgery, International Child Neurology Association (ICNA), European Paediatric Neurology Society (EPNS).

SMU Medical Journal, Volume – 3, No. – 2, July, 2016, PP. 123 – 132.