

Ovodiuk N. Evaluating the quality of life of patients with extrapyramidal complications in the rehabilitation period after a stroke after complex treatment. *Journal of Education, Health and Sport*. 2018;8(10):384-391. eISSN 2391-8306. DOI <http://dx.doi.org/10.5281/zenodo.1972217>
<http://ojs.ukw.edu.pl/index.php/johs/article/view/6354>

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part b item 1223 (26/01/2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7
© The Author(s) 2018;

This article is published with open access at Licensee Open Journal Systems of Kazimierz Wielki University in Bydgoszcz, Poland
Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.
This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.
The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 02.10.2018. Revised: 19.10.2018. Accepted: 31.10.2018.

UDK 616.831 + 616.831-005.1

Evaluating the quality of life of patients with extrapyramidal complications in the rehabilitation period after a stroke after complex treatment

N. Ovodiuk, Ph.D.

State Scientific Institution "Scientific and Practical Center of Prophylactic and Clinical Medicine" of the State Department of Affairs

Abstract

Introduction. Among the vascular diseases of the brain, the most widespread and grave consequence is a cerebral infarction (CI) which in 78% of cases leads to disability. In a significant proportion of patients who suffered an ischemic stroke there is a complicated motor defect that differs in character and degree and causes postural abnormalities, disorders of movements coordination and is associated with the phenomenon of metabolic diastasis.

Materials and methods of research. To study, we selected a group of patients (civil servants) who suffered an ischemic stroke of working age - 24 patients aged 40 to 60 years with varying degree of motor neurological, emotional-will and mental deficiency for at least 6 months after CI, and those who returned to work. Patients selected from the study group showed varying degree of extrapyramidal disorders. All patients were evaluated for the quality of life by standardized questionnaire SF-36.

Results and discussion. As a result of the study it was found that a number of neurological syndromes and/or complexes of syndroms occurred in patients with dyscirculatory encephalopathy of the working age who suffered an ischemic stroke against a

background of arterial hypertension, namely: vestibular ataxic syndrome (62%), cephalgic (72%), cerebral asthenia (88%), amnesic syndrome (82%) and anxiety-depressive syndrome (66%). In women, cerebral asthenia (88.2%), amnesic (76.5%) and anxiety-depressive (82.2%) syndromes were prevalent, cerebral asthenia (90.9%), amnesic syndrome (84.8%), cephalgic (78.8%) and anxiety-depressive (78.8%) syndromes were prevalent in men.

Conclusions. Thus, in the course of the study we have found that in order to cure the complications of extrapyramidal disorders after a stroke, it is proposed to involve neurological patients in physiotherapy and reflexotherapy more widely. It is recommended to use standardized quality of life questionnaires to assess the quality of life of patients who have suffered a stroke.

Key words: extrapyramidal disorders, quality of life, rehabilitation of post-stroke patients, stroke, cardiovascular diseases

Оцінка якості життя пацієнтів з екстрапірамідними ускладненнями в реабілітаційному періоді після перенесеного інсульту на фоні комплексного лікування

Н. М. Оводюк, к.мед.н.

ДНУ «НПЦПКМ» ДУС

Вступ. Серед судинних захворювань мозку найбільш поширеним та тяжким за своїми наслідками є мозковий інсульт (МІ), який у 78 % випадків призводить до інвалідності. У значної частини пацієнтів після перенесеного ішемічного інсульту спостерігається складний руховий дефект, що відрізняється за характером і ступенем прояву та спричиняє постуральні порушення, розлади координації рухів, які пов'язують з феноменом метаболічного діашізу.

Матеріали і методи дослідження. Для дослідження нами було відібрано групу пацієнтів (державних службовців), які перенесли ішемічний інсульт в працездатному віці – 24 хворих у віці від 40 до 60 років із різним ступенем рухового неврологічного, емоційно-вольового та психічного дефіциту упродовж не менше 6 місяців після гострої судинної події, та тих, які повернулися до праці. У пацієнтів, відібраних у досліджувану групу, відмічалися різної ступені прояви екстрапірамідних розладів. В

усіх пацієнтів проводилось визначення якості життя за стандартизованим опитувальником SF-36.

Результати дослідження та їх обговорення. В результаті дослідження було виявлено, що у пацієнтів з дисциркуляторною енцефалопатією працездатного віку, що перенесли ішемічний інсульт на тлі артеріальної гіпертензії мали місце низка неврологічних синдромів або/чи синдромокомплексів, а саме: вестибуло-атактичний синдром (62%), цефалгічний (72%), церебростенічний (88%), мнестичний (82%) та спостерігались тривожно-депресивні розлади (66%). У жінок переважали церебростенічний (88,2%), мнестичний (76,5%) та тривожно-депресивний (82,2%) синдроми, у чоловіків – церебростенічний (90,9%) мнестичний (84,8%), цефалгічний (78,8%) та тривожно-депресивний (78,8%) синдроми.

Висновки. Таким чином, в ході проведеного дослідження, нами встановлено, що для лікування ускладнень у вигляді екстрапірамідних розладів після перенесеного інсульту пропонується ширше залучати неврологічних пацієнтів до фізіотерапевтичного лікування та рефлексотерапії. Для оцінки якості життя пацієнтів, котрі перенесли мозковий інсульт, рекомендовано використовувати стандартизовані опитувальники якості життя.

Ключові слова: екстрапірамідні розлади, якість життя, реабілітація постінсультних пацієнтів, інсульт, серцево-судинні захворювання

Оценка качества жизни пациентов с экстрапирамидными осложнениями в реабилитационном периоде после перенесенного инсульта на фоне комплексного лечения

Введение. Среди сосудистых заболеваний головного мозга наиболее распространенным и тяжелым по своим последствиям является мозговой инсульт (МИ), который в 78% случаев приводит к инвалидности. У значительной части пациентов после перенесенного инсульта наблюдается сложный двигательный дефект, отличается по характеру и степени проявления и вызывает постуральные нарушения, расстройства координации движений, которые связывают с феноменом метаболического дишиза.

Материалы и методы исследования. Для исследования нами была отобрана группа пациентов (государственных служащих), перенесших ишемический инсульт в трудоспособном возрасте – 24 пациента в возрасте от 40 до 60 лет с разной степенью

двигательного неврологического, эмоционально-волевого и психического дефицита в течение не менее 6 месяцев после острой сосудистой события, и тех, которые вернулись к работе. У пациентов, отобранных в исследуемую группу, отмечались различной степени проявления экстрапирамидных расстройств. У всех пациентов проводилось определение качества жизни стандартизированным опроснику SF-36.

Результаты исследования и их обсуждение. В результате исследования было выявлено, что у пациентов контрольной группы, на фоне артериальной гипертензии, имели место ряд неврологических синдромов и / или синдромокомплекс, а именно: вестибулоатактический синдром (62%), цефалгического (72%), церебростенических (88%), мнестический (82%) и наблюдались тревожно-депрессивные расстройства (66%). У женщин преобладали церебростенических (88,2%), мнестический (76,5%) и тревожно-депрессивный (82,2%) синдромы, у мужчин – церебростенических (90,9%) мнестический (84,8%), цефалгического (78,8%) и тревожно-депрессивный (78,8%) синдромы.

Выводы. Таким образом, в ходе проведенного исследования, нами установлено, что для лечения осложнений в виде экстрапирамидных расстройств после перенесенного ишемического инсульта предлагается привлекать неврологических пациентов к физиотерапевтическому лечению и рефлексотерапии. Для оценки качества жизни пациентов, перенесших мозговой инсульт, рекомендуется использовать стандартизированные опросники качества жизни.

Ключевые слова: экстрапирамидные расстройства, качество жизни, реабилитация постинсультных пациентов, инсульт, сердечно-сосудистые заболевания

Introduction. Analysis of the dynamics of total mortality rate suggests that by 2007 it kept increasing and has began to decrease since 2008. In the structure of mortality causes in Ukraine the first place is stably occupied by diseases of the circulatory system, the second place - tumors, the third - external causes of death (trauma and poisoning). At the same time, mortality from diseases of the blood circulation system continued to grow until 2008 and it began to decrease since 2009. Despite this, Ukraine's mortality rate remains higher in comparison to most of the European countries, Canada, the USA and Australia [1-3].

Among the vascular diseases of the brain, the most widespread and grave consequence is a cerebral infarction (CI) which leads to disability in 78% of cases. Annually in Ukraine more than 100 thousand cases of brain ischemia are recorded, of which more than one third

are lethal [4, 5]. Disability of patients suffering from a stroke is mostly due to motor disorders, and it also ranks first among all causes of disability and makes up 3.2 cases per 10,000 population [6, 7].

In a significant proportion of patients who suffered an ischemic stroke there is a complicated motor defect that differs in character and degree and causes postural abnormalities, disorders of movements coordination and is associated with the phenomenon of metabolic diasthesis. These motor disorders include extrapyramidal disorders that occur in different periods of rehabilitation after a stroke, against the background of the loss of associative bonds due to the phenomenon of metabolic diasthesis.

In the acute period of the stroke with the help of perfusion magnetic resonance imaging (PMRI) it is possible to detect the presence of reversibly or irreversibly ischemic brain tissue (class II, level B). Different perfusion parameters in the same patient reflect the different volume of perfusion deficiency area. The prevalence of ischemic damage to the brain tissue is determined not only by the volume of tissue with altered perfusion, but also by the degree of perfusion's decrease [8, 9].

All extrapyramidal disorders have a significant effect on the improvement of the neurological impairment after a stroke, they deepen the neurological deficit associated with the primary focus of brain damage during a stroke, and thus have a significant negative impact on the quality of life of patients who have suffered a cerebral infarction.

At the same time, the physical methods of rehabilitation - physical therapy, massage, physiotherapy procedures, acupuncture, neurostimulation etc. - help with the recovery of the lost functions. These methods are targeted at the reflex effect path. The complex of physiotherapeutic measures after the past CI helps to reproduce lost connections between the affected site of the brain and its structures involved in the motor circles and thus improve the work of the organs administered by them.

The aim of the study was to evaluate the quality of life of patients who suffered from ischemic stroke and had extrapyramidal disorders, which, in turn, were not associated with the primary focus of stroke injury in the rehabilitation period, taking into account the treatment methods used.

Materials and methods. The research was conducted on the basis of clinical units of the therapeutic profile of the State Scientific Institution "Scientific and Practical Center of Prophylactic and Clinical Medicine" of the State Department of Affairs. To participate in the study, we selected a group of patients (civil servants) who suffered an ischemic stroke of working age - 24 patients aged 40 to 60 years (working age) with varying degrees of motor

neurological, emotional-will and mental deficits for at least 6 months after an acute vascular event, and those who returned to work. In patients selected for the study group different degrees of manifestations of extrapyramidal disorders in the form of vestibular disorders, coordination of movements impairment, postural disorders, stiffness of movements, tremor of the extremities were noted.

Complex clinical and neurological research was conducted. Magnetic resonance and/or computed imaging of the brain was performed in all patients to verify the diagnosis of past ischemic stroke and its localization.

Patients' quality of life was assessed using a standard questionnaire RAND SF - 36, which patients filled in personally [10].

Criteria for inclusion in the study were the absence of severe aphasic and cognitive impairment, the ability to independently fill out a standardized questionnaire SF -36.

The exclusion criteria were the presence of acute myocardial infarction during the inclusion in the study, unstable angina, heart failure in the stage of decompensation and other acute states that may affect the assessment of patients, the presence of severe dementia before the onset of the disease, brain tumor suspicion, history of alcoholism.

Patients in the control group were divided into 2 groups. The first 13 patients received regular treatment in the physiotherapy department (PTD) and received medication therapy, 11 patients - the second group, only receiving medication. The observation was conducted during one year.

Results and discussion

In physiotherapy department patients were treated with massage therapy, physical therapy classes, acupuncture sessions, neuromyostimulation with the "Trainer" apparatus.

As a result of the study it was found that a number of neurological syndromes and/or syndromic complexes occurred in patients with dyscirculatory encephalopathy of the working age who suffered an ischemic stroke against a background of arterial hypertension, namely: vestibular atactic syndrome (62%), cephalgic (72%), cerebral asthenia syndrome (88%), amnesic (82%) and anxiety-depressive syndromes (66%). In women, cerebrospinal (88.2%), amnesic (76.5%) and anxiety-depressive (82.2%) syndromes were prevalent; cerebral asthenia (90.9%), amnesic (84.8%), cephalgic (78.8%) and anxiety-depressive (78.8%) syndromes were prevalent in men.

Extrapyramidal disorders of various degree were reported in 46.2% of patients in the main group. In the control group, the syndromes referred to above were significantly less common in vestibular atactic syndrome (40%), cephalgic (45%), cerebral asthenia (50%),

amnesic (40%) and anxiety and depressive syndromes (45%). After carrying out a neuropsychological test on the MMSE scale in the examined patients it was found that cognitive impairments were significantly more severe in patients of the main group ($p < 0.01$). In patients with extrapyramidal disorders the aforementioned cognitive impairments were not significantly different from those without them.

Assessing the emotional and will functions of patients it was found that the difference between the main and control groups was significant ($p < 0.01$) in the indicators of moderate severity of anxiety in both sexes, as well as moderate degree and absence of depression in control group men.

In patients with extrapyramidal disorders depressive disorders were significantly more severe ($p < 0.04$) than in patients after ischemic stroke without them.

Conclusions. After assessing the patients' condition (clinical neurological examination) and assessing the quality of life of the SF-36 questionnaire after a year of rehab after the stroke it was proved that the patients in the first group had a significantly higher quality of life ($p < 0.03$) than patients in the second group, and the manifestations of extrapyramidal disorders in them also were less severe.

Thus, for the treatment of complications in the form of extrapyramidal disorders after a past ischemic stroke it is proposed to involve neurological patients more widely in physiotherapy and reflexotherapy. It is recommended to use standardized quality of life questionnaires to assess the quality of life of patients who have suffered a stroke.

Positive dynamics in quality of life indicators encourages the patients of the neurological unit prior to treatment and increases their compliance to rehabilitation techniques.

The prospects for further research are to conduct studies for assessing the quality of life of patients with extrapyramidal complications in the rehabilitation period after a stroke after complex treatment in a wider sample of patients.

Literature

1. Gandzyuk V.A. Dynamics of the morbidity and prevalence of circulatory system diseases among the population of Ukraine at the present stage: national and regional aspects // Bulletin of social hygiene and health protection organizations of Ukraine. - 2014. - No. 2. - pp. 74-78

2. National Report on Human Development 2011. Ukraine on the road to social inclusion [Electronic resource] / ed. Ru Griffiths. - K., 2011. - 124 p. - Access mode: www.undp.org.ua/files/ua_95644NHDR_2011_Ukr.pdf. - Title from the screen.
3. Horbas I. M. High cardiovascular risk of the population of Ukraine: a sentence or a reference point // Lviv clinical herald. - 2013. - No. 3. - P. 45-48.
4. Barna O. M., Goyda N. G., Korost Ya. V. Prevalence of risk factors for cardiovascular diseases in patients of the elderly // Medicines of Ukraine plus. - 2014. - No. 1. - P. 33-34.
5. Zozulya I. S., Zozulya A.I., Volosovets A.O. Some Directions of Improvement of Provision of Medical Aid in Brain Stroke // Ukrainian Bulletin of Psychoneurology. - 2017. - No. 25, no. 1. - P. 84-85.
6. Mishchenko, T. S., Derevetskaya, VG, Balkovaya, NB. Features of clinical manifestations and structural changes of the brain in patients with post-pain pain syndrome // Ukrainian Wisdom of Psychoneurology. - 2015. - T. 23. - P. 13-16.
7. Gandzyuk VA, Dyachuk DD, Kondratyuk N.Yu. Dynamics of morbidity and mortality due to CKD in Ukraine (regional aspect) // Bulletin of biological and medical problems. - 2017. - No. 2. - pp. 319-323
8. Rohl L., Ostergaard L., Simonsen C.Z. et al. Viability thresholds of ischemic penumbra of hyperacute stroke defined by perfusion-weighted MRI and apparent diffusion coefficient // Stroke. – 2001. – 32(5). – P. 1140–6
9. Seitz R.J., Meisel S., Weller P., Junghans U., Wittsack H.J., Siebler M. Initial ischemic event: perfusion-weighted MR imaging and apparent diffusion coefficient for stroke evolution // Radiology. – 2005. – 237(3). – P. 1020–8
10. Povsic T. J. et al. Endothelial progenitor cell levels predict future physical function: An exploratory analysis from the va enhanced fitness study //Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences. – 2015. – T. 71. – №. 3. – C. 362-369