

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 Authors 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: 01.02.2018. Revised: 10.02.2018. Accepted: 21.02.2018.

Zaburzenia psychiczne po udarze mózgu

Mental Disorders related to stroke

Edyta Guty¹, Irena Puszkarz², Iwona Stefaniak³

¹College of Economic Studies in Jaroslaw

²University of Jan Kochanowski in Kielce, Institute of Health and Medicine

³State Higher Vocational School Memorial of Prof. Stanislaw Tarnowski in Tarnobrzeg

Streszczenie

Udar mózgu stanowi trzecią co do częstości przyczynę zgonu i jest najczęstszą przyczyną niepełnosprawności osób po 45. roku życia. Niesie za sobą daleko idące skutki społeczne i ekonomiczne. Konsekwencją udaru są ciężkie zaburzenia w codziennym funkcjonowaniu pacjentów, wymagających często całościowej opieki oraz rehabilitacji z powodu dysfunkcji ruchowych i związanych z tym ograniczeń. Jednak w opinii badaczy do najważniejszych powikłań po udarze należą zaburzeń funkcji poznawczych oraz depresja. Często więcej uwagi poświęca się deficytom sprawności ruchowej, zaburzeniom mowy odsuwając na nieco dalszy plan poważne powikłania udaru, jak zaburzenia funkcji poznawczych czy depresja. Otępienie występuje u 1/3 pacjentów, którzy przeszli udar mózgu.

Słowa kluczowe: udar mózgu, depresja, otępienie

Abstract

Stroke is the third most common cause of death and the most common reason for disability in people over 45 years old. It impacts people in social and economic aspects. As a result of stroke, patients struggle to function in everyday life, they often require rehabilitation as they are limited in the way they can move. Experts reckon that the most serious complications after stroke are problems with cognitive functions and depression (1). Very often there is more attention paid to the deficit of mobility or speech than cognitive function problems or depression. Stupor occurs in 1/3 of patients that experienced the stroke.

Key words: stroke, depression, stupor

Słowa kluczowe: udar mózgu, depresja, stupor

Introduction

Complications after stroke can be the long or short term and they are the serious problem in modern society. Very often it causes physical disability, it is also caused by mental and psychological changes. These changes affect lots of aspects of patient's life including rehabilitation, everyday activity, social functioning and interpersonal relations (2). The sudden change in life situation such as stroke and following disability is often a big shock for a patient. One of the most common mental disorders occurring after stroke is apathy. It manifests itself as indifference, lack of reaction to stimulants, lack of personal care and also overall slow

psychomotor function. Many patients affected by stroke and its complications become emotionally unstable, with inadequate reactions to a situation such as outbursts of aggression, crying, irritability or unexplainable euphoria. Those emotional states can cause misunderstandings and conflict with other people. The illness itself can often cause the feeling of anxiety and fear about future. The most common post-stroke complication is depression. It affects one in four people who have suffered from the stroke. Professionals say that depression occurs shortly after stroke and its intensity lowers in time. Some patients manage to deal with symptoms of depression themselves, however, lack of remission within a year suggests a chronic state that increases the risk of death within 10 years (3). Every fourth patient who suffered from stroke develops stupor. This problem does not only affect patient himself but also his family and health carers. The main symptoms of stupor are attention deficit, inability to process information and disfunction of activity. Diagnosis of vascular dementia requires observation of a deficiency of cognitive functions combined with ischaemic attack symptoms. Those two need to be correlated with the specific timeline.

Depression

Post-stroke depression is considered one of the most common neuropsychiatric complication related to this illness. It is defined according to ICD-10 classification as the depressive episode that develops after a haemorrhagic or ischaemic stroke (4). Post-stroke depression has always been a point of interest amongst professionals. Unfortunately, it often remains undiagnosed and untreated. In aetiology of post-stroke depression, there are two opposite views. First connects depression with on specific place in the brain where the stroke occurs. In the 1970s a hypothesis was created according to which the level of post-stroke depression is higher if it occurs in the left part of the brain, especially in the frontal lobe (5). The most common post-stroke risk factors related to the illness itself are concerned with the clinical image of the illness – damage to frontal parts of the brain, especially left-sided, damage to basal ganglia, coexisting aphasia, atrophic subcortical changes occurring prior to stroke, also stroke due to vascularization of main artery (6). It was suggested that pathological changes in the brain may cause predisposition to depression in a patient. It was especially related to prefrontal cortex and its connection with basal ganglia as well as with hippocampus. Hippocampus is one of the central parts of the limbic

system and it has numerous neural connections with different brain structures responsible for emotions. Nevertheless, this hypothesis was not confirmed. Conducted research has shown the certain connection between the clinical image of depression and age, gender, level of neurological deficit and localisation of stroke. It was confirmed that women are more likely to suffer post-stroke depression and increased symptoms of depression during the ischemic stroke are connected primarily with a vascular damage of dominant side of the brain (7). Many experts reckon that concomitance of stroke and depression has its aetiology in bio-genetical factors as well as psychological and social (8,9). Today it is believed that etiopathogenesis of posttraumatic depression is heterogenic. The risk factors include prior stroke, depression, genetic factors, prolonged stress, loneliness. Development of posttraumatic depression is also affected by psycho-social factors such as social isolation, deteriorated financial situation, loss of social and work status, loss of independence, inactivity and increasing disorder of cognitive functions (5). However, many studies suggest that it is depression that affects cognitive functions and that those functions are already affected by stroke. Assumedly, increased depression symptoms cause the deterioration of cognitive functions and stupor. Modern studies show that around 80% of patients require antidepressants and around 25% develop stupor (1). Symptoms of depression develop usually within 3 to 6 months after the stroke. Some patients do not have any symptoms, however, 30% of them develop depression after they leave the hospital. Most patients still show symptoms of depression longer than 6 months after the stroke. It is probably related to the severity of the stroke. Severe post-stroke depression goes into remission after 2 years in 75% of patients. Only 30% of patients with light symptoms experience remission within 2 years. The reason may be lack of treatment of depression (4). The key treatment for post-stroke depression is medication. Many authors reckon that is difficult to diagnose depression in patients which results in lack of appropriate pharmacological treatment. Patients also need psychological rehabilitation in order to improve patient's adaptation to new situation they find themselves in – physical disability and change in social status. It is difficult to diagnose depression in patients because of disturbed speech, physical expressions and cognitive functions. However, experts strongly believe that psychological examination should be a routine procedure at all stages of the treatment (5).

Dementia

According to classification of illnesses (ICD-10) by WHO (World Health Organisation), dementia is an illness caused by brain damage. It has progressive or chronic character. It

manifests itself in disturbed cognitive functions such as memory, thinking processes, orientation, understanding, counting, ability to learn, speech functions, ability to compare make choices. Dementia is accompanied by deteriorated cognitive functions and everyday activity functions for at least 6 months. It is possible to diagnose dementia when at least two cognitive functions are disturbed and one of them is memory (10). Post-stroke dementia includes: vascular dementia, stroke in strategic places, stupor from hypoperfusion and post-haemorrhagic dementia. Vascular dementia is the one caused by the presence of numerous ischaemic points located cortically. Stroke in strategic places affects mainly thalamus, cingulate gyrus, angular gyrus and frontal lobe. Dementia caused hypoperfusion is often a consequence of disturbed cerebral circulation or circulatory insufficiency. Post-haemorrhagic dementia is related to a cerebral or arachnoid haemorrhage (11). As mentioned above, stroke leads to physical disability, but it can also cause problems with cognitive functions. Neurological deficiencies caused by the stroke can manifest themselves as brain functional disorders, either focal or global (12). Focal symptoms can be related to the ability to speak and cognitive functions such as: memory, visual-spatial orientation, attention and executive functions (13). The kind and intensity of those deficiencies depend on the variety of factors, such as: localisation of vascular changes in the central nervous system, number of previous strokes, age, lifestyle, genetic predisposition, brain plasticity and physical abilities the patient had before the stroke. In many cases, cognitive malfunctions occur up to the third month after the incident (14). However, the significant number of patients struggle with those problems for the rest of their lives. Clinical studies show, that patient's state stabilises within a year or two, however it's often seen that it never stabilises at all (15).

Summary

Vascular dementia is usually a consequence of either ischaemic or haemorrhagic stroke. It can also be caused by antral stroke or changes that are the result of a disturbed perfusion in periventricular substantia alba. It is a challenge to differentiate post-stroke depression from an actual dementia. The similarity of symptoms observed in both illnesses are often cause of misdiagnosis. Sometimes dementia manifests itself by symptoms characteristic for depression.

It is possible that both illnesses occur at the same time (10). To differentiate them from each other, expert recommends considering the beginning of the problem (depression – acute, dementia – progressive and difficult to observe). They also recommend observing memory distortion (depression – changeable, dementia – stable) and lowered mood (depression – stable, dementia – changeable) (15). Numerous studies confirm that post-stroke depression affects most patients who experienced the stroke. It significantly lowers their chances of surviving. When undiagnosed and untreated, depression causes deteriorated cognitive functions. Experts reckon that the time between first symptoms of depression and beginning of treatment can be a significant factor influencing patient`s cognitive functions (1). Experts say that depression occurs in 25-30% stroke cases. For that reason, the psychological examination should be a routine procedure with patients who suffered from the stroke (16,17). If the patient remains at home or long-term health facility it should be the responsibility of a doctor and a nurse to ease psychological state of a patient who had suffered from the stroke. Early diagnosis of mental disorders described above has significant importance in improving patient`s psychological state. It is also crucial for prophylactic of complications being the result of not applying therapy for depression and dementia. Correct diagnosis allows implementing appropriate pharmacological treatment, to improve physical state of a patient and to educate persons who care for a patient.

Bibliography:

1. Borkowska A. Warwas I. Wiłkość M. Drożdż W. (2007). Neuropsychologiczna ocena dysfunkcji poznawczych po udarze mózgu. *Psychiatria*, (4), 39-44.
2. Ziółkowska-Kochan M., Pracka D. (2003). Depresja po udarze mózgu. *Psychiatria w Praktyce Ogólnolekarskiej*, (3), 203-208.
3. Lipczyński A. (2017). Zespół depresyjny po przebytych udarze mózgu. Retrieved from <http://www.psychologia.net.pl/artykul.php>.
4. Wysokiński A. (2016). Depresja poudarowa. *Psychiatr Psychol Klin*, (16), 171–175.
5. Nowakowska K. Adamiak G. Jabłkowska K. Lewandowska A. Stetkiewicz A. Borkowska A. 2009. Deficyty poznawcze i zaburzenia depresyjne u chorych po udarze mózgu. *Postępy Psychiatrii i Neurol*, (18), 255-262.
6. Wichowicz H. 2008. Czynniki ryzyka depresji poudarowej. *Udar Mózgu*,(10), 91–95.
7. Jadczyk A., Kaca-Oryńska M., Friedman A. (2009). Poziom depresji w ostrej fazie udaru mózgu w zależności od lokalizacji ogniska niedokrwiennego w dominującej lub

- niedominującej półkuli mózgu. *Udar Mózgu*, (11), 1–8.
8. Wichowicz H. (2008). Depresja poudarowa-zaburzenie biologiczne czy psychopochodne? *Udar Mózgu*, (10), 40–48.
 9. Fudala M. Broła W. Czernicki J. (2013). Stan funkcjonalny chorych trzy lata po udarze mózgu w zależności od powikłań neurologicznych i ogólnomedycznych. *Przeł Med Uniwersytetu Rzeszowskiego i Narodowego Instytutu Leków w Warszawie Rzeszów*, (1), 7–20.
 10. Bilikiewicz A. Matkowska-Białko D. (2004). Zaburzenia funkcji poznawczych a depresja. *Udar Mózgu*, (6), 27–37.
 11. Opala G., Ochudło S. (2005). Poudarowe zaburzenia poznawcze. *Polski Przegląd Neurologiczny*. (1), 35-43.
 12. Mazur R. (2007). Neurologia kliniczna dla lekarzy i studentów medycyny. *Via Medica*, Gdańsk.
 13. Ballard C., Rowan E., Stephens S. (2003). Prospective follow-up study between 3 and 15 months after stroke: improvements and decline in cognitive function among dementia-free stroke survivors > 75 years of age. *Stroke*, (34), 2440-2445.
 14. Jodzio K., Biechowska D., Szurowska E. (2011). Neuropsychologiczna ocena zaburzeń kontroli wybranych funkcji poznawczych i motorycznych po udarze mózgu. *Postępy Psychiatrii i Neurologii*, (20), 251-257.
 15. Spetruk P. Opala G. (2005). Wieloaspektowy charakter depresji występującej po udarze mózgu. *Udar Mózgu*, (7), 25–30.
 16. Dobrzyńska E., Rymaszewska J., Kiejna A., (2007). Depresja u osób w wieku podeszłym. *Psychogeriatrya Polska*. (4), 51-60.
 17. Ziółkowska-Kochan M., Pracka D. (2003). Depresja po udarze mózgu. *Psychiatria w Praktyce Ogólnolekarskiej*, (3), 203-208.