Oleksy Eliza, Kasperska Paulina, Sokołowski Remigiusz, Ziółkowska Anna, Klimkiewicz-Wszelaki Karolina, Zukow Walery, Kędziora-Kornatowska Kornelia. The case of a patient of 80 years old with epilepsy and neurocognitive disorders. Journal of Education, Health and Sport. 2019;9(8):507-515. eISSN 2391-8306. DOI http://dx.doi.org/10.5281/zenodo.3381667
http://ojs.ukw.edu.pl/index.php/johs/article/view/7355

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 declare that there is no conflict of interests regarding the publication of this paper.

Received: 05.08.2019. Revised: 15.08.2019. Accepted: 29.08.2019.

Przypadek 80-letniego pacjenta z padaczką i zaburzeniami neuropoznawczymi

The case of a patient of 80 years old with epilepsy and neurocognitive disorders

Eliza Oleksy [1], Paulina Kasperska [1], Remigiusz Sokołowski [1,2], Anna Ziółkowska [1], Karolina Klimkiewicz-Wszelaki [1], Walery Zukow [3], Kornelia Kędziora-Kornatowska [1]

1) Department of Geriatrics,Collegium Medicum,
Nicolaus Copernicus University, Bydgoszcz
2) Clinic Neurosurgery and Neurology, Stroke Care Unit, Collegium Medicum,
Nicolaus Copernicus University, Bydgoszcz
3) Nicolaus Copernicus University, Toruń

Key words: epilepsy, neurocognitive disorders, multiple diseases, overall geriatric assessment, older age, case study

Słowa kluczowe: padaczka, zaburzenia neuropoznawcze, wielochorobowość, całościowa ocena geriatryczna, wiek starszy, studium przypadku

Abstrakt

Wstęp. Padaczka jest bardzo rozpowszechnioną chorobą na świecie. Jest to jedna z najczęstszych chorób neurologicznych starszego wieku. Jednak starszy wiek jest również związany z wielochorobowością i pogorszeniem funkcji poznawczych. Powoduje to zmniejszenie lub utratę możliwości uniezależnienia się od innych osób w zakresie podstawowych czynności dnia codziennego, takich jak: poruszanie się, odżywianie, kontrola zwieraczy i utrzymanie higieny osobistej. Zaburzenia występujące w tak szerokim zakresie u osób z demencją często przekładają się na niepełnosprawność w życiu codziennym. Poprawa jakości życia pacjentów polega przede wszystkim na utrzymaniu autonomii w dbaniu o siebie, tak długo, jak to możliwe. Dlatego jednym z najważniejszych elementów poprawy jakości życia osoby starszej jest wczesne wykrycie zaburzeń neurokognitywnych, rehabilitacja pacjenta i wykonanie zaleconych testów przesiewowych.

Opis przypadku. 80-letni pacjent został przyjęty do kliniki geriatrycznej w trybie pilnym z powodu zawrotów głowy i upadków. Pacjent żyjący z rodziną, zależny od innych w życiu codziennym, samowystarczalny finansowo. Pacjent przyjmuje leki z różnych grup z powodu wielu chorób. Objawy pacjenta: zawroty głowy i częste upadki. Z powodu ostatniej skargi, skonsultowanej na oddziale medycyny ratunkowej, przeprowadzono tomografię głowy. Test nie wykazał żadnych oznak świeżego krwawienia. Pacjent cierpi na epilepsję, jest w stanie po leczeniu krwiaka podtwardówkowego oraz po zawale serca kolejno w latach 2001, 2003, 2004 r. W 2003 r. wykonano angioplastykę wieńcową. Pacjent cierpi również na nadciśnienie, cukrzycę typu 2 i przewlekłą chorobę nerek. Brak stosowania używek: narkotyków, alkoholu i papierosów.

Wynik. Ryzyko ograniczeń funkcjonalnych wzrasta wraz z liczbą występujących chorób i jest szczególnie duże u osób powyżej 80 roku życia. Wiele chorób stanowi poważny problem w rehabilitacji, dlatego rehabilitacja geriatryczna powinna być przeprowadzana na wielu poziomach. Kompleksowa ocena geriatryczna pomaga zdiagnozować problem i opracować plan poprawy jakości życia pacjenta. Ponadto należy stosować suplementację witamin u osób starszych. Należy również kontrolować leki stosowane przez osoby starsze i zmiany zachowania. Pacjenci powinni stosować się do zaleceń pracowników ochrony zdrowia i chodzić na badania laboratoryjne, jak i przesiewowe testy neuropsychologiczne.

Abstract

Background. Epilepsy is a very widespread disease in the world. It is one of the most common neurological diseases of old age. However, older age is also associated with multi-morbidity and cognitive decline. This will result in a decrease or loss of the possibility of being independent of

other people in the scope of basic everyday activities such as: moving, nutrition, sphincter control and maintaining personal hygiene. Disorders occurring in such a wide range in people with dementia often translate into disability in everyday life. Improving the quality of life of patients consists primarily in maintaining autonomy in self-service for as long as possible. Therefore, one of the most important elements of improving the quality of life of an elderly person is the early detection of neurocognitive disorders, rehabilitation of the patient and performing prescribed screening tests.

Case report. A 80- year-old patient admitted to the Clinic of Geriatric in urgent matter due to dizziness and falls. Patient living with family, dependent in daily life, financially self-sustaining. Patient takes medicines from different groups due to multiple diseases. Patient's symptoms: dizziness and frequent falls. Because of the last complain, consulted in the department of emergency medicine, head tomography was conducted. The test showed no signs of fresh bleeding. The patient suffers from epilepsy. Patient has condition after treatment of subdural hematoma, in the state after heart attacks in 2001, 2003, 2004. In 2003 coronary angioplasty was performed. Patient is also suffering from hypertension, type 2 diabetes and chronic kidney disease. No use of drugs, alcohol and cigarettes.

Result. The risk of functional limitations increases with the number of diseases present and is particularly large in people over 80 years of age. Multiple diseases is a serious problem in rehabilitation, therefore geriatric rehabilitation should be carried out on many levels. A comprehensive geriatric assessment helps diagnose the problem and develop a plan to improve the patient's quality of life. In addition, vitamin supplementation should be implemented in the elderly. Also medications used by the elderly and behavioral changes should be controlled. Patients should follow the recommendations of health care workers and attend both laboratory and neuropsychological monitoring tests.

Background

Epilepsy is a tendency to have recurrent seizures. Epilepsy affects around 50 million people worldwide; 80 per cent of them are in developing countries. In these countries, although most cases can be treated, around 75% of people with epilepsy are not receiving appropriate treatment [1]. It can affect anyone at any age. It is one of the most common serious neurological conditions and it also belongs to one of the most common syndromes in the elderly population. The results of epidemiological studies indicate that in highly industrialized countries occurrence of unprovoked epileptic seizures is greater in people over 65 years old than children under 10 years old. In the

population of adult people incidence rates are increasing with age; in the group of people over 75 years of age are five times higher than in the young adult population. [2, 3, 4].

Old age is associated with the growth of specific health problems, and research shows that one of the fastest growing health problems in elderly people is dementia. World Health Organization (WHO) defines dementia as a syndrome caused by a brain disease, usually of chronic or progressive nature, in which cognitive functions such as memory, thinking, orientation, understanding, counting, learning ability are impaired. language, the ability to compare, evaluate and make choices, but with all this awareness is not affected. Cognitive impairment usually accompanies, and sometimes precedes, lowering control over emotional, social, behavioral and motivational responses. Dementia due to complex causes, therapeutic difficulties and serious consequences is included in the Great Geriatric Problems [5, 6]. Functional efficiency is the ability to be independent of other people in the field of basic everyday activities such as: moving, nutrition, sphincter control and personal hygiene. Disorders occurring in such a wide range in people with dementia often translate into disability in everyday life. Improving the quality of life of patients consists primarily of maintaining autonomy in self-service for as long as possible [7.8].

Comprehensive Geriatric Assessment (CGA) is a multidirectional, integrated diagnostic process, which aims to determine the scope of disorders and determine therapeutic and rehabilitation priorities, as well as the needs and possibilities of providing further treatment, rehabilitation or care. Determines the ability of an elderly person to function independently and determine the health, psychological and social needs of the elderly. CGA should be performed by a therapeutic team: doctor, clinical neuropsychologist, physiotherapist and nurse. A very important element is cooperation with the patient's family. CGA includes functional status assessment, physical health and mental function assessment, and socio-environmental assessment. The assessment of the functional status includes: the scale of assessment of basic vital functions - the scale of Catalase - activities of daily living ((ADL) , Lawton's scale - instrumental activities of daily living ((IADL) and assessment of the patient's fitness according to the Barthel scale - required by the National Health Fund (NFZ) for qualification for institutions care. The assessment of physical condition includes: scales commonly used in medicine (e.g. scale of circulatory failure), balance and gait assessment -Tinetti, assessment of risk of falls - Tinetti scale, risk of pressure sores - Norton scale, assessment of operational risk. Mental state assessment includes recommended screening tests: Mini-Mental State Examination ((MMSE), Clock Drawing Test (CDT) or as an alternative to both tests Montreal Cognitive Assessment)MoCA). Also used are: mental fitness test

according to Hodkinson, the Hachinsky scale that differentiates vascular dementia from Alzheimer's disease, the Geriatric Depression Scale (GDS). Laboratory tests are mainly important in detecting potentially reversible causes of dementia. The most common are: morphological tests, biochemical tests to assess liver and kidney function, TSH, determination of vitamin B12 and folic acid, and serological tests for neuroinfection, syphilis and Human Immunodeficiency Virus (HIV) [9,10,11].

Case report

A 80- year-old patient admitted to the Clinic of Geriatric in urgent matter due to dizziness and falls. Patient living with family, dependent in daily life, financially self-sustaining.

General ailments: frequent falls which were consulted in the department of emergency medicine, head tomography was conducted. The test showed no signs of fresh bleeding.

Coexisting diseases: The patient suffers from epilepsy. Patient has condition after treatment of subdural hematoma, in the state after heart attacks in 2001, 2003, 2004. In 2003 coronary angioplasty was performed. Patients is suffering also from hypertension, type 2 diabetes and chronic kidney disease.

Diseases past, operations completed, injuries, hospitalizations: patients negates.

Drugs used: Pradaxa 75mg, Furosemid 40mg 1/2, Beto ZK 100mg, Gabapentin 2x1mg, Depakine 500mg, IPP 20mg, Effox long 50mg 1/2, Insulatard – the patient does not remember the doses.

A comprehensive geriatric assessment and morphological tests were performed. Results: Tinetti Scale 5/16 points - high risk of falls, IADL Scale 12/27 points - disabled person, requiring care, slight grade dementia syndrome, features of the anxiety disorder, normocytic anemia, iron deficiency, folic acid deficiency, severe vitamin D3 deficiency

The results of computer tomography of the head - within the normal range.

Due to the low blood glucose values (the patient during the course did not require intensive insulin therapy) the previous treatment was verified.

During hospitalization, the general condition deteriorated (sleepy patient, dry cough). Empirical antibiotic therapy has been introduced, resulting in gradual improvement – Tazocin 2x 4,5mg, 30 doses. Discharged home in a stable state.

In conservative treatment, the medicines used: Clexane 40mg/0,4ml, Clexane 60mg/0,6ml, Depakine Chrono 300 300mg, Ipp 20mg, lignin sheets, Metocard 95mg, Paracetamol 500mg, MultiSure GK – stripes, Symleptic 300mg, Tulip 20mg, Venaplast.

Indicated pro-cognitive treatment and re-neuropsychological consultation in 6 months to assess the rate and dynamics of changes in cognitive functions. Indicated treatment of anxiety.

Discussion

Case report of a 76-year-old woman complaining of an acute worsening of cognitive status anda fluctuating level of consciousness. Patent suffering from dementia, complex partial seizures, hypertension and depression. The woman was taking two antiepileptic drugs valproicacid, 1000 mg/ die and oxcarbazepine, 600 mg/die and ticlopidine, sartan/hydrochlorothiazide 50 + 12.5mg and paroxetine 20 mg/die. In the patient's medical history, 16 years ago, an indefinite cerebrovascular accident occurred. After an eeg test that led to the diagnosis of complex partial status epilepticus (CPSE), the patient immediately received intravenously diazepam (5mg) with resolution of clinical and electroencephalographic manifestations. On the fifth day after CPSE a severe impairment of memory and attention with minor deficits of language and praxia at the neuropsychological assessment were discovered. The MMSE score was 12/30. She was discharged with an increased dose of oxcarbazepine (1800 mg / die). Neuropsychological evaluation showed unchanged cognitive performance in 3 months of follow-up [12].

Confusion or a moment of inattention are common in older people, especially in patients with dementia [13,14]. In dementia patients, a rapid decline in cognitive ability may resemble several disorders: transient ischemic attack, mental disorder, metabolic encephalopathy, prolonged postictional confusion, substance intoxication and transient global amnesia and [15].

Case report of a 82-year-old man with multimorbidity admitted to the neurological rehabilitation unit. A multidisciplinary team of specialists was involved in the process of

rehabilitation. Patient with persistent atrial fibrillation treated with acenocoumarol. He took nonsteroidal anti-inflammatory drugs according to the recognition method due to polyarticular pain in the course of osteoarthritis. The patient could not sit up alone, he required active belaying during upright position in bed. On the Barthel scale, ADL got 1 point. The neuropsychological examination revealed abnormalities in the following: the attention system, memory functions, higher movement organization and executive functions. As a result of comprehensive rehabilitation was obtained significant functional improvement in the patient (in the Scale Barthel ADL got 14 points). At the time of discharge, the patient was ordered to: check blood pressure regularly, limit the consumption of salt and animal fats, increase the amount of fruit, vegetables and fish consumed, daily exercise of moderate intensity for 30 minutes (pulse rate up to 60% of maximum heart rate), maintaining a healthy weight (body mass index 20-25), taking medicine regularly as prescribed by your doctor [16].

Conclusions

After analyzing the data and information presented, several conclusions can be drawn. The risk of functional limitations increases with the number of diseases present and is particularly large in people over 80 years of age. Multi disease is a serious problem in rehabilitation, therefore geriatric rehabilitation should be carried out on many levels. A comprehensive geriatric assessment helps diagnose the problem and develop an plan to improve the patient's quality of life. In addition, vitamin supplementation should be implemented in the elderly. Also medications used by the elderly and behavioral changes should be controlled. Patients should follow the recommendations of health care workers and attend both laboratory and neuropsychological monitoring tests.

Bibliography

1. Joint Epilepsy Council., Epilepsy prevalence, incidence and other statistics. UK and Ireland: Joint Epilepsy Council; 2011.

2. D. Ryglewicz., Padaczka u osób starszych [Epilepsy in the elderly]. Polski Przegląd Neurologiczny 2010; 6 (4): 190–195 (in Polish).

3. Olafsson E., Ludvigsson P., Gudmundsson G., et al., Incidence of unprovoked seizures and epilepsy in Iceland and assessment of the epilepsy syndrome classification: a prospective study. Lancet Neurol. 2005; 4: 627– –634.

4. Cloyd J., Hauser W., Towne A., et al., Epidemiological and medical aspects of epilepsy in elderly. Epilepsy Res. 2006; 68 (supl. 1): 39–48.

5. World Health Organization: Dementia – public health priority. WHO Library Cataloguing-in-Publication, United Kingdom; 2012.

6. Barcikowska M., Otępienie w podeszłym wieku [Elderly dementia] W: Grodzicki T., Kocemba J., Skalska A. (red.). Geriatria z elementami gerontologii ogólnej. Wydawnictwo Via Medica, Gdańsk 2006: 98 – 107 (in Polish).

7. Białachowska A., Niesprawność funkcjonalna w umiarkowanym otępieniu w przebiegu choroby Alzheimera [Functional disability in moderate dementia in the course of Alzheimer's disease]. Geriatria. 2010; 4: 5 – 9 (in Polish)

8. Folstein M.F., Folstein S.E., McHugh P.R. Mini-mental state. A practical method for grading the cognitive state of the patient for the clinician. J Psychiatr Res. 1975; 12: 189 – 198.

9. Sobów T., Zaburzenia psychiczne wywołane organicznym uszkodzeniem ośrodkowego układu nerwowego" (otępienia, organiczne zburzenia psychiczne) [Mental disorders caused by organic damage to the central nervous system (dementia, organic mental disturbance)], Psychiatria, Red. Jarema M., Wydawnictwo PZWL, Warszawa 2011, 324-325 (in Polish).

10. Crum R.M., Anthony J.C., Bassett S.S., Folstein M.F. Population-based norms for mini-mental state examination by age and educational level. JAMA. 1993; 269: 2386-2391.

11. Ouchi Y., Akanuma K., Meguro M., Kasai M., Ishii H., Meguro K., Impaired instrumental activities of daily living affect conversion from mild cognitive impairment to dementia: the Osaki-Tajiri Project. Psychogeriatrics. 2012; 12: 34 – 42.

12. Chiara C., Giovanni A., Giovanni P., et al., Nonconvulsive Seizures and Dementia: A Case Report., International Journal of Alzheimer's Disease, 2011; Volume 2011, 4 pages.

13. Stephen L. J., Brodie M. J., Epilepsy in elderly people., *Lancet*, 2000; vol. 355, no. 9213, pp. 1441–1446.

14. Scarmeas N., Honig L. S., Choi H., et al., Seizures in Alzheimer disease: who, when, and how common?; *Archives of Neurology*, 2009; vol. 66, no. 8, pp. 992–997.

15. H. Meierkord and M. Holtkamp.; Non-convulsive status epilepticus in adults: clinical forms and treatment.; *Lancet Neurology*, 2007; vol. 6, no. 4, pp. 329–339.

16. Białkowska J., Mroczkowska D., Specyfika rehabilitacji pacjentów geriatrycznych z wielochorobowością – opis przypadku 82-letniego pacjenta [Specyfika rehabilitacji pacjentów geriatrycznych z wielochorobowością – opis przypadku 82-letniego pacjenta], Geriatria, 2014; 8: 196-200 (in Polish).