

## Care Issues of the Patient after a Stroke — Case Report

### Problemy pielęgnacyjne pacjenta po przebytych udarze mózgu — opis przypadku

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#### Abstract

**Introduction.** With the advancement of civilization, the number of cerebral strokes increases, which is a challenge for modern medicine. Reduction of patients' capacity is reflected in all aspects of a patient's life. The condition after stroke requires assistance in basic daily activities (washing, dressing, eating, moving, etc.). Family must accept the fact of existing limitations and the need to acquire the knowledge and skills required to cope with a patient immobilized after a stroke. The aim of the study is to identify selected deficits and problems of patients after stroke.

**Case Report.** The case study refers to a 82-year old patient with a stroke. The patient's condition is defined as average, requiring hospitalization and constant monitoring. The work presents selected problems observed in a patient after a stroke. The patient presented is only a work description of the case of a theoretical patient.

**Discussion.** Condition after stroke is a significant burden for the patients and their families. Problems concern the biological, mental and social spheres. Assistance to the patient and their family should commence when the patient is admitted to hospital and after a stroke has been diagnosed. The patient's care problems after stroke constitute significant limitations in functioning and in returning to previous conditions. Researchers largely analyze the quality of life in all aforementioned dimensions.

**Conclusions.** Nursing care issues include physical, mental as well as social aspect. The patient in her current state of health requires 24-hour care and full compensation for basic daily activities. Once the patient has been discharged home, she will require further treatment and personalized and comprehensive care. (JNNN 2017;6(1):28–32)

**Key Words:** Ischemic stroke, nursing problems

#### Streszczenie

**Wstęp.** Wraz z postępowaniem cywilizacji wzrasta liczba zachorowań na udary mózgu, co stanowi wyzwanie współczesnej medycyny. Zmniejszenie wydolności pacjentów przekłada się na wszystkie aspekty życia pacjenta. Stan po udarze mózgu wymaga pomocy przy podstawowych czynnościach dnia codziennego (mycie, ubieranie, spożywanie posiłków, poruszanie i in.). Rodzina musi pogodzić się z faktem istniejących ograniczeń i konieczności nabycia wiedzy i wypracowania umiejętności wymaganych do opieki nad pacjentem unieruchomionym po udarze mózgu. Celem pracy jest wskazanie wybranych deficytów oraz problemów pacjenta po udarze mózgu.

**Opis przypadku.** Opis przypadku odnosi się do pacjentki lat 82 z rozpoznaniem udaru mózgu. Stan pacjentki określa się jako średni, wymaga hospitalizacji oraz stałego monitoringu. Praca przedstawia wybrane problemy zaobserwowane u pacjenta po przebytych udarze. Praca stanowi opis przypadku pacjenta teoretycznego.

**Dyskusja.** Stan po udarze mózgu stanowi znaczne obciążenie dla pacjenta i jego rodziny. Problemy dotyczą zarówno sfery biologicznej, psychicznej i społecznej. Pomoc pacjentowi i jego rodzinie powinna rozpocząć się w momencie przyjęcia pacjenta do szpitala i po rozpoznaniu udaru mózgu. Problemy pielęgnacyjne pacjenta po przebytych udarze mózgu stanowią znaczne ograniczenia w funkcjonowaniu i powrocie do stanu sprzed choroby. Naukowcy w znacznej mierze analizują jakość życia we wszystkich wspomnianych wymiarach.

**Wnioski.** Problemy pielęgnacyjne pacjentki obejmują aspekt fizyczny, psychiczny i społeczny. Pacjentka w obecnym stanie zdrowia wymaga całodobowej opieki i pełnej kompensacji podstawowych czynności dnia codziennego. Po wypisaniu pacjentki do domu będzie wymagała dalszego leczenia oraz zindywidualizowanej i całościowej opieki. (PNN 2017;6(1):28–32)

**Słowa kluczowe:** udar niedokrwienny, problemy pielęgnacyjne

## Introduction

With the advancement of civilization, the number of cerebral stroke increases, which is a challenge for modern medicine. In addition, there is an increased mortality rate observed, according to studies of stroke has the third place after ischemic heart disease as well as cancer. Literature reports that more than 20% of patients die in Europe in the first three months of life, while another 20% remain with high disease-related deficits without returning to the pre-stroke condition. Apart from somatic problems, there is observed high psychological discomfort of patients and development of anxiety and depression [1].

Vascular diseases are one of the most widely studied neurological sections. Researchers pay particular attention to the quality of life of patients with cerebral thrombosis and functional impairment [2,3].

Reduction of patients' capacity is reflected in all aspects of a their lives. The approach to the patient should be considered in the broad sense. A comprehensive patient assessment allows to diagnose patients' problems properly, set goals, and apply implementation measures that deliver possibly the most effective results. The condition after stroke requires help in basic daily activities (washing, dressing, eating, moving, etc.). Currently, therapy is not limited to pharmacological treatment, but specialist literature deals with the rehabilitation of stroke patients and the modification of the patient's lifestyle. Recommendations after hospitalization include physical activity, diet, rehabilitation, control and possible weight reduction, with drawing from stimulants [1,4].

In addition, there is a need to involve the family in self-help at home. Family must accept the fact of existing limitations and the need to acquire the knowledge and skills needed to cope with a patient immobilized after a stroke. Apart from education in nursing and care, particular attention should be paid to the support of the families of patients [5]. When left to their own devices they cannot cope with the situation, in the case of such difficulties, the family decides to apply for support from an institution.

The aim of the study is to identify selected deficits and problems of patients after stroke. The article presents a proposal for nursing intervention in a reaction to a specific nursing problem.

## Case Report

A 82-year old patient admitted to the Neurology Department in an emergency mode. In pre-diagnosis, suspicion of stroke, left ventricular palsy, right lung tumor and right pleural fluid, heart failure, and a trial fibrillation were diagnosed. It is clear from the interview with the family that the patient was under the care of a cardiologist and rheumatologist. So far, she has been using the balcony due to hip and knee joints degeneration. For about 3–4 months, the patient complained of left eye disorders.

The patient's family called for emergency ambulance due to fainting and collapse, followed by paralysis of the lower limbs. In addition, after initial examination at admission, muscular strength decrease and speech impairment were observed.

Currently the patient in the 3rd day of hospitalization, in the general average condition. Mental state is defined as mediocre, contact with patient difficult because of difficulties with articulation of words, unclear, often illogical speech. The patient is periodically confused about herself, place and time. During the on-call duty, submerging, visible high fatigue and lack of desire on the part of the patient for any activity and cooperation with staff. There is still left eye obstruction, and complete lack of feeling is observed.

During the stay the patient had a blood test, CT of the head and lung x-ray. In a CT scan of the head with no contrast there were found in the right parietal lobe the lesions that may indicate brain stroke. Lung x-ray showed the presence of a small amount of fluid in the pleura and air less ness in the right lung. Blood tests confirmed the diagnosis of stroke.

It is advisable to perform a right plethectomy on the patient and to include steroid therapy. In addition, oxygen therapy was periodically prescribed at 0.5–1.0 l/min, under the control of gasometry and antibiotic therapy — Ceftriaxone 2 g/day i.v., 500 ml 0.9% NaCl, 500 ml PWE. Under control there is glycemic control, hydration and monitoring vital life parameters. At present, the patient needs complete help in basic daily activities. Due to immobilisation, it is necessary to supply appropriate equipment, facilities and care products. The patient requires round-the-clock care, resulting from present health condition and the risk of deterioration. It would be helpful to provide care from the doctor, nurse, rehabilitation or physiotherapist, dietitian, psychologist,

and speech therapist. Assistance and support is also required by the patient's family, who is involved in the care of the patient at hospital and will continue to provide care after discharge from hospital. The family declares that they do not expect a social worker's assistance and will not use long-term care facilities for long-term patients.

*Problem 1: Deficit in Self-care and Nursing*

Objective: Ensuring basic biopsychosocial needs.

Actions:

1. Performing the whole body toilet.
2. Performing oral toilet.
3. Changing personal and bed linen.
4. Regular placement change.
5. Ensure appropriate microclimate in the hall.
6. Observation of the patient during the performance of care activities.
7. Encourage the family to perform nursing care activities.
8. Ensure the safety and comfort of the patient.
9. Ensuring intimacy and respect for personal dignity while performing care activities.
10. Documenting the activities.

Evaluation: The biopsychosocial needs were ensured as far as possible.

*Problem 2: Ability to Develop Soreness and Bedsores Caused by Immobilization*

Objective: Prevent the emergence of contract.

Actions:

1. The use of variable pressure mattress.
2. Use of bedside amenities (extra pillows, rollers, wedges, movable headboards).
3. Regular position change, minimum every 2 hours.
4. Blotting and greasing areas of pressure ulcers.
5. Use of lubricants during massage.
6. Ensure proper hygiene of the body and personal and bed linen cleanliness.
7. Frequent change of diaper pants.
8. Proper hydration and nutrition of the patient, a diet rich in protein enriched with vitamins and microelements.
9. Provide microclimate in the hall.
10. Performing passive exercises in bed.
11. Cooperation with physical therapist/physiotherapist.
12. Observing the skin of the patient in respect of the chafet areas.
13. Assessing the risk of bedsores on Norton scale.
14. Getting blood for diagnostic tests at the doctor's written prescription.

15. Document the risk of bedsores.

Evaluation: There was no bedsores. Prophylactic anti-retinal prevention is continued.

*Problem 3: The Risk of Contracting is Due to Limb Paresis*

Objective: Reduce the risk of contracting.

Actions:

1. Performing passive exercises.
2. Regular placement change.
3. Pharmacotherapy to reduce spasticity.
4. Cooperation with a physical therapist/physiotherapist.
5. Joint massage with lubricants.
6. The use of bedside amenities.
7. Observation for spasticity/contracting.
8. Documenting the actions taken.

Evaluation: Improvement right after the exercise. The risk of contracting has been reduced.

*Problem 4: Risk of Thromboembolism Arising from Present Health Condition*

Objective: Reduce/eliminate the risk of thromboembolic events.

Actions:

1. Regular placement change, minimum every 2 hours.
2. Passive exercises within the bed.
3. Cooperation with the physical therapist/physiotherapist.
4. Caring for proper hydration of the patient.
5. Supply of medicines at the doctor's written request (anticoagulation).
6. Monitoring body hydration (measurement of vital parameters, measurement of body weight and body circumference).
7. Getting blood for diagnostic tests at the written request of the doctor.
8. Observation of lower limbs in respect of thromboembolic changes.
9. Documenting the actions taken.

Evaluation: The threat has been reduced.

*Problem 5: Possibility of Pneumonia Emergence Due to Secretions in the Bronchial Tree*

Objective: Preventing the occurrence of pneumonia. Facilitating the evacuation of bronchial secretions.

Actions:

1. Proper hydration of the body (p.o. and i.v.).
2. Control of body hydration (measurement of vital parameters).

3. Getting blood for diagnostic tests.
4. Supply of medicines at the doctor's written request.
5. The position of the patient in the half-high position.
6. Changing bed and personal linen (cotton).
7. Greasing the back and chest.
8. Blinding the back and chest.
9. Encouraging effective coughing.
10. Ventilating the room and providing adequate microclimate.
11. Observation of the patient in respect of appropriate hydration of the body.

Evaluation: Pneumonia did not occur. The secretion is effectively evacuated from the respiratory tract.

*Problem 6: Difficulty in Taking Meals Orally Due to Swallowing Disorders*

Objective: Reducing/eliminating the risk of eating disorders, dehydration and water-electrolyte disturbances.

Actions:

1. Appropriate positioning of the patient during meal (high/midpoint).
2. Protecting personal and bed linen against dirt.
3. Serving meals in small portions, increased frequency of administration.
4. Adjusting the food to the needs of the patient (appropriate meal temperature, aesthetics, the patient's taste).
5. Performing oral toilet after eating a meal.
6. Providing the patient with appropriate conditions to receive meals (peace, quiet, patience).
7. Control of nutrition (weight measurement).
8. Documenting the frequency and quantity of food and fluid intake.

Evaluation: The risk has been reduced. There were no eating disorders, dehydration and water-electrolyte disturbances.

*Problem 7: Discomfort to the Patient Due to Communication Difficulties*

Objective: Reducing discomfort. Improving the patient's mental state.

Actions:

1. Providing mental support to the patient.
2. Expression of understanding, cordiality and patience.
3. Talking to the patient about the difficulty of communication.
4. Informing the patient about the intended actions.
5. Passing information slowly, loudly and clearly.

6. Issuing commands in the form of short, simple messages.
7. Proposing facial muscle exercises.
8. Motivating the patient to practice speech.
9. Observation of the patient towards the well-being.
10. Enabling contact with her loved ones.
11. Inclusion the family in the co-operation in the patient's care.
12. Cooperation with rehabilitant and speech therapist.

Evaluation: No visible progress in communicating with the patient.

## Discussion

The condition after stroke is a significant burden for the patient and their family. The problems concern the biological, mental and social spheres. Along with the patient, the disease affects his loved ones, causing difficulties for the whole family. Previous functions are disturbed in order to assist the patient with a disability. Researchers largely analyze the quality of life in all these dimensions.

Assistance to the patient and his family should commence when the patient is admitted to hospital and after a stroke has been diagnosed. Appropriate approach of medical staff greatly facilitates further therapy. The nurse — patient relationship should be based on mutual cooperation and strive for the best results. In Marciniak's opinion, the key aspects of nursing care include the health education provided during the whole stay in hospital preparing for self-care [5].

The care problems of the patient after stroke significantly reduced functioning and returning to previous conditions. According to research by Krzemińska it is the family mentioned as the most important, and the rehabilitant and the doctor indicated as the person in the second place who most significantly contributed to the healing of patients. This demonstrates, among other things, the need to support the patient and to ensure their safety, both in hospital and at home. It results from the fact that the support from the immediate family in the performance of physical activities, as well as also showing kindness and patience, improves the patient's quality of life [6].

Jaracz, on the basis of his research, claims that comprehensive postnatal care including treatment for depression and strengthening social support can significantly reduce the impact of stroke on the quality of life [7]. This is also confirmed by other authors who support the thesis that social support is the strongest factor in improving the quality of life. However, it mainly refers to the psychological significance, and less to the broadly understood function [8,9].

Summing up, in the post-stroke condition there is a high probability of difficulty in returning to full psychomotor well-being. Patients have significant neurological and functional deficits, and this is reflected in their quality of life. The problems of the patient remain in all spheres of everyday life and include the biopsychosocial range. The consequences of a stroke refer not only to patients, threatening their health and life, but also to their families. It is crucial in the care of the patient to identify problems appropriately, to set goals, to choose the means of implementation, and evaluate the actions implemented [10,11].

## Conclusions

As a result of the consequences of a recognized stroke, the patient requires total nursing care. A holistic, yet personalized approach to the patient is required. The scope of the assistance covers all aspects of functioning. The patient has a difficulty in meeting the basic needs of everyday life. The physical state of the patient translates into mental and social deficits.

The current state of health of the patient requires the inclusion of an interdisciplinary team to help the patient. The recommendations for the patient include continuous control in a neurological clinic and periodic rehabilitation. The scope of patient's improvement is currently limited to verticalization and passive exercises in bed. Rehabilitation towards the patient aims at increasing the range of mobility in the joints and at reducing/decreasing the risk of systemic complications. In addition, observation of nutrition and hydration of the body is required. As a result of eating disorders, the possibility of having a gastric tube and the necessity to irrigate through the intravenous route should be considered.

## References

- [1] Kleinrok A., Płaczekiewicz D., Stefańczyk P., Kudrelek K. Wpływ wybranych czynników socjodemograficznych i klinicznych na stopień niepełnosprawności pacjentów hospitalizowanych z powodu udaru mózgu. *Prz Med Univ Rzesz Inst Leków*. 2013;11(2):151–163.
- [2] Prusiński A. (Red.), *Neurogeriatria. Praktyczne problemy neurologii w wieku podeszłym*. Wyd. Czelej, Lublin 2004.
- [3] Przysada G., Kwolek A., Mazur A. Wpływ wybranych czynników na efekty rehabilitacji u chorych po udarze mózgu. *Rehabilitacja Medyczna*. 2007;11(3):29–37.
- [4] Broła W., Węgrzyn W. Jakość życia po udarze mózgu. *Studia Medyczne Akademii Świętokrzyskiej*. 2006;3(1):161–167.
- [5] Marciniak M., Królikowska A., Ślusarz R., Jabłońska R., Książkiewicz B. Opieka pielęgniarska w udarach mózgu. *Probl Pielęgn*. 2010;18(1):83–88.
- [6] Krzemińska S., Bekus A., Borodziej A., Arendarczyk M. Analysis and Evaluation of Subjective Quality of Life in a Group of Patients after Ischemic Stroke. *Pielęgn. Neurol. Neurochir*. 2016;5(2):58–68.
- [7] Jaracz K., Kozubski W. Jakość życia po udarze mózgu. Cz. 2 — Uwarunkowania kliniczne, funkcjonalne i społeczno-demograficzne. *Udar Mózgu*. 2001;3(2):63–69.
- [8] Kim P, Warren S., Madill H., Hadley M. Quality of life of stroke survivors. *Qual Life Res*. 1999;8(4):293–301.
- [9] King R.B. Quality of life after stroke. *Stroke*. 1996;27(9):1467–1472.
- [10] Ślusarz R., Beuth W. Optymalna opieka pielęgniarska w udarach mózgu. *Mag. Pielęgn. Położ.* 2001;9:26–27.
- [11] Rosińczuk-Tonderys J., Żerkowska U., Aleksandrowicz K., Siepiela P. Problemy życia codziennego chorych po udarze niedokrwinnym mózgu. W: Rosińczuk-Tonderys J., Uchmanowicz I. (Red.), *Choroby przewlekłe — aspekty pielęgnacyjne, rehabilitacyjne, terapeutyczne*. Wyd. MedFarm Polska, Wrocław 2011;1–14.

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