

IMPLEMENTATION OF WALKING ASSISTING EQUIPMENT AND PHYSICAL EXERCISE TO INCREASE MUSCLE STRENGTH AND IMPROVE PHYSICAL MOBILITY IN STROKE PATIENTS

Karimatun Nisa'wahyuningtyas, Muhammad Khabib Burhanuddin Iqomh*

Sekolah Tinggi Ilmu Kesehatan Kendal, Jl. Laut No.31, Ngilir, Kendal, Central Java 51311, Indonesia

*m.khabib@stikeskendal.ac.id

ABSTRACT

Stroke is a disease that can occur when some brain cells die due to abnormal blood flow due to blockage or rupture of blood vessels in the brain. This research method is the answer to the report, this research case study uses a nursing process approach which consists of 5 stages, namely assessment, nursing diagnosis, nursing intervention, nursing implementation, and evaluation. Objective: to find out the provision of walking aids and physical exercise in increasing muscle strength and mobility, after being carried out for 3 days on Mr. Y.

Keywords: mobilization; physical training; risk of falling

INTRODUCTION

Cardiovascular disease has increased in working countries, cardiovascular disease is the third disease in Japan. Death from vascular disease can be similar to death from stroke, According to the World Health Organization (WHO), in 2021, more than 4.6 million people died worldwide, two out of three deaths occurred in developing countries. The household health survey (SKRT) shows that 37.3 per 100,000 people suffer from stroke. Based on the vital statistics of the Ministry of Health, Labor and Welfare in 2021, stroke cases are the 4th largest cause of death among Japanese people, first place: cancer, second place: heart disease, third place: aging. The number of stroke cases in Japan is 1.742 million. In men there were 941 while in women there were 801. The highest number of sufferers was in men aged 70 years and women aged over 80 years. Based on data from the World Health Organization (WHO) 2020, there is an increase in the prevalence of stroke in Indonesia, around 15 million people suffer from stroke every year, of which 5 million suffer from stroke, 5 million sufferers experience disability, and 5 million sufferers die. The results of the Riskesdas Basic Health Research data, (2020) show that 8.3 per 1000 people suffer from stroke. There was an increase in 2021, namely 12.1%. This disease can also cause major deaths in almost all Indonesian hospitals with a percentage of 14.5%. The number of stroke sufferers in Indonesia is estimated at 1,236,826 people, of all recorded stroke sufferers, 80% of which are ischemic strokes.

Patients who carry out activities independently are at risk of falling. This is because many patients insist on carrying out their activities independently even though they are unable to fulfill them. The inability of stroke patients can be seen from the patient having a disease that can interfere with their activities and also many patients using assistive devices to carry out their activities (Suryani, 2018) Stroke sufferers have limited activities such as the ability to carry out daily tasks, stroke sufferers also experience difficulty in carrying out self-care, the patient's physical exercise needs to be adjusted to the recovery stage and have a healthy environment and supportive social support, physical exercise that needs to be done after recovery post-stroke, namely bed rest. Taking a walk after 12 months and doing physical exercise regularly can increase physical mobility and increase muscle strength (Billinger et al, 2019). Rehabilitation that can be given to stroke patients is the

provision of walking aids and physical exercise to stroke patients to restore motor function in patients who experience problems due to a stroke.

METHOD

This type of method is a descriptive method with a case management approach to the implementation of providing walking aids and physical exercise to stroke patients to increase muscle strength carried out over 3 days using data techniques in the form of interviews and direct observation of patients and families.

RESULTS AND DISCUSSION

From the results of the study, it was found that the patient, Mr.Y The results of the physical examination showed BP: 170/110 mmHg, Spo2: 91%, temperature: 36 °C, pulse frequency: 88 x/minute, RR: 25 x/minute. Muscle strength of left hand and leg 3, right hand and leg Physical examination. Based on the case review that has been carried out in this chapter, the author will discuss the implementation of giving walking aids and physical exercise to stroke patients to increase muscle strength, which is the first priority that the author obtained from the results of case management starting from March 4 2024 through Several stages of the nursing process include assessment, formulation of diagnosis, intervention, implementation and evaluation stage.

CONCLUSION

After giving walking aids and physical exercise for 15 minutes every day for 3 days, the results were obtained before and after carrying out physical exercise and giving walking aids. These results show that pathological physical exercise and the provision of walking aids can increase muscle strength.

REFERENCES

- WHO.(2021). Stroke, Cerebrovascular Accident. Take from http://www.who.int/topics/cerebrovascular_accident/en/
- WHO.(2021). Stroke, Cerebrovascular Accident. Diakses on March 27,2021 at <http://www.who.int/topics/cerebrovascular/accident/en>
- SDKI DPP PPNI (2019). Indonesian Nursing Diagnosis Standards (SDKI).I. South Jakarta: Central Executive Board of the Indonesian National Nurses Association.
- SIKI DPP PPNI (2019). Indonesian Nursing Diagnosis Standards (SIKI).I. South Jakarta: Central Executive Board of the Indonesian National Nurses Association
- SLKI DPP PPNI (2019). Indonesian Nursing Diagnosis Standards (SLKI).I. South Jakarta: Central Executive Board of the Indonesian National Nurses Association
- Putri (2018). Basic Human Needs and the Nursing Process 5th Edition. 5th edn. Edited by Salemba Medika. South Jakarta; Salemba Medika.
- Nursalam, (2018). Nursing Management Applications in Professional Nursing Practice. Jakarta: Salemba Medika

- Nursalam. (2016). *Nursing Research Methodology: A Practical Approach*, Edition 4. Jakarta: Salemba Medika Publisher.
- Nably. (2017). *Early Detection of Stroke Symptoms and Treatment*. Yogyakarta: Auliya Publishing.
- Sugiarto, & Permatasari, N. (2020). Comparison of Non-Hemorrhagic Stroke with Motor Disorders in Patients Having Risk Factors for Diabetes Mellitus and Hypertension. *Sandi Husada Health Scientific Journal*.
- PPNI, T. P. (2018). *Indonesian Nursing Intervention Standards*. South Jakarta: Central Executive Board of the Indonesian National Nurses Association.
- Basic Health Research 2017 (RISKESDAS). Jakarta: Health Research and Development Agency, Ministry of Health of the Republic of Indonesia 2017. 2017: 113.
- Rahmawati. (2018). *Medical Surgical and Internal Medicine Nursing Care*. Yogyakarta: Yuha Medika.
- Olivia. (2017). The Effect of Range of Motion (ROM) on Muscle Strength in Bedrest Elderly at PSTW Budhi Mulia 3 Margaguna, South Jakarta. Quoted from repository.uinjkt.ac.id on January 22 2018.
- Yurida (2020). The Effect of Range of Motion (ROM) Exercise Health Education on Family Skills in Carrying Out ROM for Stroke Patients. Quoted from ejournal.kopertis10.or.id on January 22 2018.
- Sari & Farah, (2020). *Nursing Fundamentals 3rd Edition*. Jakarta: Salemba Medika.
- Junaidi, dkk. (2011). *etiology of non-hemorrhagic stroke*, Basic Nursing. Jogja Health Polytechnic Press: Yogyakarta.
- Retno, C Alice, Marilyn E Doenges,. (2021). *Nursing Care Plans A Guide to Planning and Documenting Patient Care*. Jakarta: EGC.
- Trisnain, (2019). Preliminary Report on Barriers to Physical Mobility. Accessed from <http://www.Report-introduction-barriers-to-mobility-physicspdf.com> on January 18 2018.
- Irdawati. (2019). The Effect of Movement Exercise on Balance in Non-Hemorrhagic Stroke Patients. *Journal of Public Health*, 7(2), 129-136.
- Santoso. (2019). *Nursing Care Application Based on Medical Diagnosis and NANDA NIC NOC Volume 1,2,3*. Yogyakarta: MediaAction.
- Thompson, S., Wiebe, N., Padwal, R. S., Gyenes, G., Headley, S. A. E., Radhakrishnan, J., & Graham, M. (2019). The Effect of Exercise on Blood Pressure in Chronic Kidney Disease: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *PLoS One*, 14(2), e0211032. <https://doi.org/10.1371/journal.pone.0211032>.

Lopes, S., Mesquita-Bastos, J., Alves, A. J., & Ribeiro, F. (2018). Exercise as a Tool for Hypertension and Resistant Hypertension Management: Current Insights. *Integrated Blood Pressure Control*, 11, 65-71. <https://doi.org/10.2147/ibpc.s136028>.

Anggraini, A dan Oliver, J. (2021). *Journal of Chemical Information and Modeling*,53(9),1689–1699.

Zhu, Z., Yan, W., Yu, Q., Wu, P., Bigambo, F. M., & Chen, J. (2022). Association between Exercise and Blood Pressure in Hypertensive Residents: A Meta-Analysis. *EvidenceBased Complementary and Alternative Medicine*, 2022. <https://doi.org/10.1155/2022/2453805>