



## FAMILY NURSING CARE OF PHYSICAL MOBILITY DISORDERS IN PATIENT WITH POST STROKE IN BLULUK VILLAGE, LAMONGAN REGENCY

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Case Study

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### ABSTRACT

**Introduction:** Stroke is brain damage due to blood supply to the brain, an event that suddenly takes place within 24 hours without realizing it, such as rupture of blood vessels in the brain and lack of blood supply in the brain. Prevalence by sex male 11.0% (10.5-11.5 per mile) 355,726 cases, female sex 10.9 (10.4-11.4 per mile) 358,056 cases. The proportion of stroke control to health care facilities in the population aged 15 years with stroke prevalence in East Java routinely 40.0% sometimes 39.5% not re-checking 20.5%. The purpose of this study was to carry out Family Nursing Care In Post Stroke Cases With Nursing Problems Of Physical Mobility Disorders. **Methods:** This research method uses a case study. Data were collected by means of interviews, observations, and documentation studies. **Results:** The results of the case studies indicate that there are gaps in the assessment of nursing care. Nursing diagnoses according to the IDHS lead to the main priority, namely Mobility Support (D.0045), priority nursing actions according to SIKI Mobilization Support (I.05173), with an outcome according to the SLKI Physical mobility (L.05042), evaluation of the main priority diagnoses, namely impaired mobility partially resolved by home visits for 6 days. **Conclusions:** Intervention combination Active and passive Range Of Movement techniques are very important for stroke patients. The family can motivate and teach the client to do this.

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### INTRODUCTION

One of the nursing problems that need further treatment is physical mobility barriers, because stroke patients will feel a loss of strength in one of the movement members. In stroke sufferers or paralyzed half the body, usually the patient will have difficulty in carrying out activities due to limited space of motion. The prevalence of stroke in Indonesia is 10.9% stroke, while the prevalence of East Java is 12.4% (11.5-13.4 per mile). 113,045 cases, prevalence by age 15-24 (0.6%), 25-34 (1.4%), 25-44 (3.7%), 45-54 (14.2%), 55-64 (32.4%), 65-74 (45.3%), 75+ (50.2%). Prevalence by sex male 11.0% (10.5-11.5 per mile) 355,726 cases, female sex 10.9 (10.4-11.4 per mile) 358,056 cases. Proportion of stroke control to health care facilities in population aged 15 years with regular stroke prevalence in East Java 40.0% sometimes 39.5% not re-examined 20.5% (Kemenkes RI, 2018). Data on stroke cases at Pukesmas Bluluk contained 5 patients (0.2%) of the total 2,500 patients in 2019, there

were 7 patients (0.3%) of the total 2113 patients in 2020, and from January to May there were 2 cases in 2021. The percentage of stroke with impaired physical mobility over the last 2 years was 16 case. Based on data from Bluluk Village, Bluluk District, Lamongan Regency, stroke disease in 2020 was 7 patients (1.3%) out of 512 patients. The description of the data above, the problems that have increased in this study are family nursing care in post-stroke cases with nursing problems with physical mobility disorders, some of the population who experience strokes are due to unhealthy lifestyles and rarely exercise.

Stroke chronology is closely related to high blood pressure which affects the appearance of vessel wall damage so that the blood vessel walls are uneven (Pudjiastuti, 2013). Cerebrovascular injury is a disorder of the brain as the central nervous system that controls and triggers the movement of the musculoskeletal neuron system. The clinical symptoms that often appear are the presence

of hemiparesis or hemiplegia which causes the loss of normal postural reflex mechanisms for balance and body rotation to move functionally in the extremities. Sensory and motor disturbances in stroke cause balance disorders including decreased muscle strength, flexibility of soft tissues, and impaired motor control in stroke patients resulting in loss of coordination, loss of body balance and posture (the ability to control certain positions) and stroke can cause permanent physical disability. According to Aprilia (2017) the most common consequence of stroke is hemiplegia or hemiparesis, even 80 percent of stroke patients suffer from hemiparesis or hemiplegia which plays a role in one side of the body being weak or even paralyzed. As a result, dissolved substances such as cholesterol, calcium and so on will settle on the vessel walls, known as blood vessel constriction (Pudjiastuti, 2013). If the constriction of blood vessels occurs for a long time, it will result in reduced blood supply to the brain, even stopping which in turn causes a stroke.

A stroke causes a sudden disruption of the blood supply to the brain, causing the blood supply to the brain to be blocked or called an ischemic stroke, and it can also cause a blood vessel to burst in the brain or called a hemorrhagic stroke. Factors that can cause stroke are divided into irreversible or non-modifiable risk factors and modifiable or modifiable risk factors (Hartono, Puspitasari, & Adam, 2019). Risk factors that cannot be changed include increasing age and male sex. Modifiable risk factors include stress, hypertension, diabetes mellitus, and dyslipidemia (Hartono, Puspitasari, & Adam, 2019). Hypertension is a potential risk factor in the incidence of stroke because hypertension can cause rupture of cerebral blood vessels or cause constriction of brain blood vessels (Dinata, Safrita, & Sastri, 2013). Rupture of blood vessels in the brain will result in cerebral hemorrhage, whereas if there is constriction of cerebral blood vessels it will interfere with blood flow to the brain which in turn causes the death of brain cells (Dinata, Safrita, & Sastri, 2013).

How to deal with stroke by adopting a healthy lifestyle, including eating a balanced diet, exercising regularly, and avoiding stress. As an effort to prevent stroke, you should check your health regularly. Handling of stroke clients, especially new clients, should be done quickly and precisely (Agoes, 2011). Determining the determination of the type of stroke pathology early is very important for proper drug administration to prevent a more fatal impact (Arifianto, Moechammad, & Onny, 2014). The role of nurses in handling stroke cases due to

bleeding is to conduct a primary survey including adequate airway, breathing, circulation. The patient is placed in a lateral or semi-prone position with the head of the bed slightly elevated until the venous pressure is reduced. ECG monitoring needs to be done, stroke is common in people with heart disorders and dysrhythmias, such as atrial. Laboratory examinations for stroke include blood sugar levels, complete blood cell count, serum chemistry, prothrombin time, and partial thromboplastin time.

The existence of Health Service Facilities can affect public health. Health service facilities are used to carry out health service efforts, nurses can provide family nursing care, which includes promotive, preventive, curative, and rehabilitative aspects (Sulaiman et al., 2021). The promotive role is carried out by providing counseling to patients and their families about how to prevent stroke. The preventive role is to make home visits to risk groups so as to prevent the occurrence of stroke. The curative role is to teach relaxation distraction techniques to reduce pain in stroke patients. The rehabilitative role is recovery efforts for stroke patients such as controlling diet, controlling foods that stimulate stomach acid, reducing stress, and getting adequate rest (Oktariana & Khrisna, 2019).

Family support is support that consists of verbal and non-verbal information or advice, real help or actions given by social intimacy and obtained because of the presence of those who have emotional ties or behavioral effects for those who receive it (Setryaningrum, 2012). The recovery of a stroke patient will be greatly helped if the family provides encouragement, shows confidence in the patient's improvement, and allows the patient to do as much and live as independently as possible. This can be done by giving ROM exercises both active and passive.

ROM exercises are exercises performed by post-stroke patients and their families. Therefore, as educators, nurses need to assist family independence in assisting the initial rehabilitation of stroke patients in the form of passive ROM exercises as a family effort to improve the ability to overcome family health problems and play a role in improving family health which can later be used by families at home after the patient returns from hospital. (Budi, Hendri, & Agonwardi, 2016).

Physical mobility problems that occur in stroke patients can physical exercise in the form of Range of Movement (ROM) exercises was carried out. ROM exercises are maximal movement exercises performed by joints. ROM exercise is a form of exercise that functions in

maintaining joint flexibility and muscle strength in stroke patients (Desiane, 2016). Efforts are made to stroke patients who experience motor problems, namely by providing ROM therapy to increase the ability of the muscles to prevent unwanted paralysis or hemiparase in the hands and feet (Rhoad & Meeker, 2008). Based on the description above, the authors are interested in carrying out family nursing care for post-stroke patients with impaired physical mobility which will be carried out in Bluluk Village, Bluluk District, Regency Lamongan.

## **MATERIALS AND METHODS**

The research design used in this study is a case study research, which is a research by exploring the problem of family nursing care in post-stroke cases with nursing problems with physical mobility disorders. Patients performed family nursing care actions by way of home visits. Collection data is done by interview, observation and documentation.

This study uses a semi-structured interview type, in which the interviewer can develop questions based on the answers from the interviewees, so that this method is more flexible and allows for more in-depth data (Satori, 2013). In this study, the research used a family nursing care format as a research instrument.

## **RESULTS**

### **Assessment**

At the assessment stage, there are gaps and compatibility between the literature review and case review. The assessment was carried out according to the format contained in the literature review. The case study was conducted on Mr. S, Mr. H, Mrs. Sr., Mrs. S and Mr. R with Stroke in Bluluk Village, Bluluk District, Lamongan Regency.

There is a match between case reviews and age identity assessments on clients who have been studied with stroke patients aged 40-75 and over. Pudiastuti (2011) the age of stroke sufferers is 40-75 years and above, in the previous family history stroke can be decreased from families who have a history of hypertension, cholesterol, previous heart disorders, headaches usually occur, nausea, vomiting, even convulsions until unconscious (Muttaqin, 2011). There is a client who has a history of high blood descent Mrs. Sr. Hypertension is defined as a condition where a person's blood pressure exceeds the normal blood pressure limit (Hartono, Puspitasari, & Adam, 2019). Modifiable risk factors include hypertension, cardiovascular disease, diabetes mellitus, dyslipidemia, sickle cell anemia, postmenopausal hormone therapy, poor diet,

obesity, smoking habits, and lifestyle (Yani, 2019). Risk factors that cannot be changed include increasing age and male sex (Hartono, Puspitasari, & Adam, 2019). Risk factors that cannot be changed include increasing age and male sex. In the client there are 2 types of stroke, namely a homoragic stroke in Mrs. S, Mrs. Mr. S and non hemorrhagic stroke in Mr. client. R, Mr. H. Stroke is a symptom defined by a functional brain disorder that occurs suddenly with clinical signs and symptoms, both focal and global, lasting 24 hours or more (Permatasari, 2020). A stroke causes a sudden disruption of the blood supply to the brain, causing the blood supply to the brain to be blocked or called an ischemic stroke, and it can also cause a blood vessel to burst in the brain or called a hemorrhagic stroke (Hartono, Puspitasari, & Adam, 2019). Hemorrhagic stroke is an event where a blood vessel bursts so that blood flow becomes abnormal (Tamburian, 2020).

There is a gap between literature review and case review in the history of hereditary diseases, there are 4 clients, namely Mr. S, Mr. H, Mrs. S, Mr. The R I studied said that his family members had no history of hypertension, diabetes cholesterol, etc., there were 4 clients in the past, namely Mr. S, Mr. H, Mrs. S, Mr. R said that he did not have a previous disease, stroke prevention such as controlling hypertension, diabetes mellitus, dyslipidemia, and smoking cessation programs, especially in reducing salt intake, limiting sugar intake, regular exercise, good stress management, and quitting alcohol consumption can reduce stroke mortality. and also stroke recurrence (Langhorne, Bernhardt, & Kwakkel, 2011).

Physical examination in the case review on the client three there were differences in the main complaint, namely the client said there was paralysis in the right hand and foot, the client experienced disability since 1 month ago. Physical examination on the client Mr. S, Mr. H, Mrs. S, Mr. R did not find any complaints on nerves VII and IV. The author's opinion on the suitability and discrepancy of the above description is the importance of maintaining a healthy lifestyle, maintaining a healthy diet, not consuming fast food, exercising frequently and not smoking. Stroke factors that can be changed are hypertension, cholesterol, diabetes by reducing consumption of high salt, trans fat and saturated fat. Maintaining satisfaction and meaningful relationships between aging parents, encouraging children to achieve intellectual development, encouraging children to achieve intellectual development.

## **Nursing diagnoses**

In nursing diagnoses there is a match between literature review and case review. Nursing diagnoses in this case found 6 diagnoses, namely impaired physical mobility, anxiety, knowledge deficit, self-care deficit, verbal communication damage, and skin integrity damage (SDKI, 2017).

The literature review to 7 nursing diagnoses Ineffective airway clearance related to accumulation of secretions, decreased breathing ability, decreased secondary physical mobility, and changes in level of consciousness, Impaired physical mobility associated with hemiparesis/hemiplegia, weakness of hemiparesis in hands and feet (Muttaqin, 2008). Risk for impaired skin integrity related to prolonged bed rest, Impaired verbal communication related to effects of damage to speech areas in cerebral hemispheres, loss of control of facial or oral muscle tone, and general weakness. Self-care deficit related to hemiparesis weakness, decreased strength and consciousness loss of muscle control characterized by weakness for ADLs, such as eating, bathing, controlling water temperature, folding or dressing, knowledge deficit related to lack of exposure to stroke prevention information, anxiety related to anxiety failure. This means that there is a match between nursing diagnoses and case reviews and literature reviews. The diagnosis that was not present in the case review was ineffective airway clearance related to accumulation of secretions, decreased breathing ability, decreased secondary physical mobility, and changes in the patient's level of consciousness compositis and normal breathing frequency.

There is a gap in the literature review and case review, namely not all diagnoses in the literature review appear in the case review, namely airway clearance is not effective. Because at the time of the assessment there were no complaints of the client's respiratory system, the client's family changed the client's bed rest position every 2 hours and positioned the patient's coconut 30 degrees higher than the feet.

In the author's opinion, there are several factors that cause impaired physical mobility in clients that I examine, one of which is behavioral attitudes such as active smokers, diet, hypertension and stress. There are 5 clients that the authors examine experience weakness in the limbs or hemiparesis, hemiparesis is partial paralysis on one side of the body that can affect the arms, legs and facial muscles. An unhealthy diet can trigger an increase in cholesterol levels and hypertension which is one of the triggers for stroke. In

diagnosis 2 there are 5 nursing problems, namely knowledge deficit, anxiety, self-care, damage to verbal communication and the risk of damage to skin integrity. How to deal with stroke by adopting a healthy lifestyle, including consuming foods with balanced nutrition, diligently exercising, and avoiding stress.

## **DISCUSSION**

### **Nursing Intervention**

In nursing interventions match between literature review and case review, the interventions have been arranged according to the order of priority diagnoses, namely impaired physical mobility associated with hemiparesis, anxiety associated with fear of failure, self-care deficit associated with hemiparesis weakness, lack of exposure to knowledge deficit information, risk of skin integrity related to prolonged bed rest, Impaired Verbal Communication related to decreased cerebral circulation.

In a case review, nursing diagnoses of impaired physical mobility are associated with hemiparesis. The intervention given to Mr. S, Mr. H, Mrs. Sr., Mrs. S and Mr. R is Mobilization support I.05173. Identification of pain or other physical complaints, Identification of physical tolerance for movement, Monitor heart rate and blood pressure before starting mobilization, Monitor general condition during mobilization, Facilitate mobilization activities with assistive devices (eg bed railings), Facilitate movement, if necessary necessary, Involve the family to assist the patient in increasing movement, Explain the purpose and procedure of mobilization, Advise early mobilization, Teach simple mobilizations that must be done (eg sitting in bed, sitting on the side of the bed, moving from bed to chair) (SIKI, 2017). The intervention in diagnosis 1 given to Mr. S, Mr. H, Mrs. Sr., Mrs. S and Mr. R with problems with impaired physical mobility related to hemiparesis, with the criteria for results Physical mobility L. 05042: Movement of hands and feet, muscle strength, increased range of motion ROM, pain, anxiety, joint stiffness, uncoordinated movement, limited movement and decreased physical weakness (SLKI, 2017).

One of the interventions that needs further treatment is physical mobility barriers, because stroke patients will feel a loss of strength in one of the movement members. In stroke sufferers or paralyzed half the body, usually the patient will have difficulty in carrying out activities due to limited space of motion (Wicaksono, 2017). Physical mobilization is a condition in which the body is able to adapt to the conditions experienced by a person and

physical mobilization is carried out with a range of motion (Tidore, 2019). ROM exercise is a form of exercise that functions in maintaining joint flexibility and muscle strength in stroke patients (Desiane, 2016).

The author's opinion is to support physical mobility by training patients to move passive and active ROM, there are 5 patients who experience weakness on the client's side with almost the same dependence, in carrying out daily activities the client is assisted by his family with muscle weakness 3 on the side weak body. Mobility support with the aim of increasing hand and foot movement, muscle strength, range of motion ROM.

### **Nursing Implementation**

The writer found a match between literature review and case review. In the case review when nursing actions were carried out, the implementation was carried out according to the interventions made previously according to PPNI SIKI 2018. Implementation of the diagnosis of physical mobility disorders related to hemiparase had been carried out according to the intervention with 6 home visits. Implementation in the diagnosis of 2 anxiety is associated with fear of failure, self-care deficit related to hemiparase weakness, knowledge deficit, lack of exposure to information, risk of skin integrity related to prolonged bed rest, Impaired Verbal Communication associated with decreased cerebral circulation.

ROM exercises are exercises performed by post-stroke patients and their families. Therefore, as educators, nurses need to assist family independence in assisting the initial rehabilitation of stroke patients in the form of passive ROM exercises as a family effort to improve the ability to overcome family health problems and play a role in improving family health which can later be used by families at home after the patient returns from hospital (Esti, 2020).

Giving passive ROM therapy in the form of movement exercises on the wrists, elbows, shoulders, toes or on the extremities experiencing hemiparesis is very useful to avoid complications due to lack of movement, such as contractures, joint stiffness (Irfan, 2014). Efforts are made to stroke patients who experience motor problems, namely by providing ROM therapy to increase the ability of the muscles to prevent unwanted paralysis or hemiparase in the hands and feet (Rhoad & Meeker, 2008).

During the implementation, the authors found problems that could hinder the implementation and activities that had been previously planned due to time constraints. This is because the patient and family are

cooperative and open, making it easier for the author to carry out an implementation that aims to move hands and feet, muscle strength, increased range of motion, pain, anxiety, joint stiffness, uncoordinated movement, limited movement and decreased physical weakness.

### **Evaluation**

In the evaluation between intervention and implementation with the objectives achieved, there is conformity. In the case review of nursing diagnoses of impaired physical mobility related to hemiparase, the resulting evaluation was the problem was partially resolved in 6 home visits by doing early mobilization and doing ROM movements, in accordance with SIKI PPNI 2018. Nursing diagnosis cases Anxiety resolved. Verbal communication disorders partially resolved. All self-care deficits were resolved. All risks of skin integrity damage were resolved in 3 home visits by explaining the meaning of stroke, its signs and causes, providing education about self-care, maintaining and caring for skin health, practicing speech therapy.

Nursing evaluation: Movement exercise for post-stroke patients is an implementation for achieving patient independence, because movement exercises will help gradually return or close to normal limb and arm function, and suffer from strength in these patients to control their daily activities and the impact if not given ROM rehabilitation which can cause muscle and joint stiffness, the daily activities of the patient can depend totally on the family, the patient is difficult to meet daily needs (Ignasius, 2020).

### **CONCLUSION**

Implementation nursing actions in cases of post stroke with impaired mobility physically carried out in accordance with nursing diagnosis planning according to the priorities that have been made, nursing actions can be done well because families can work together through cooperative action and attitude open.

Expected clients and families able to overcome health problems suffered by taking advantage of sources of health services appropriate, protect the environment and can take medication regularly. Families are able to take care of clients with stroke, especially in conditions physical and psychological.

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