



Mobilization of Stroke Patients to Prevent Decubitus: A Systematic Review

Ahmad Farid Rivai¹, Meli Nur Imani²

¹⁻² Cirebon Muhamadiyah Nursing Academy, West Java, Indonesia

Abstract. Stroke is a disease or nerve disorder that occurs suddenly due to impaired blood flow to the brain. Stroke is known to cause various complications including the occurrence of decubitus wounds. Decubitus is one of the most frequent complications experienced by stroke patients. One of the therapies that can be given to prevent these complications is to take mobilization actions. The purpose of this literature review has been to analyze the provision of mobilization measures in stroke patients to prevent decubitus. The search method uses the Mendeley, PubMed, and Google Scholar databases between 2017 and 2021, with the keyword "Mobilization and Patient Stroke and Pressure Sores" obtained from 100 journals, from the Mendeley 82, PubMed 1 and Google Scholar 17 databases, then from these 100 journals a selection was made and 5 articles were obtained that can be reviewed according to the inclusion criteria. Results and Discussion of a review of literature review in 5 articles stated that mobilization measures can prevent decubitus in stroke patients. Mobilization can facilitate circulatory circulation, maintain muscle tone, and maintain and increase joint range of motion. Mobilization can be given to stroke patients with mobilization actions in the form of changes in the right tilt position, left tilt, and changes in tilt position 30 degrees. This position change can be done every 2 hours. The conclusions and recommendations of this literature review suggest that the administration of mobilizing measures is effective in preventing the occurrence of decubitus in stroke patients. For this reason, this research recommendation is that patients with bed rest be mobilized and given olive oil smears.

Keywords: Decubitus, Mobilization, Stroke Patients

INTRODUCTION

A stroke is a sudden disruption of nerve function caused by disruption of blood flow to the brain. The global incidence of stroke reaches 15 million, and 5 million people die from stroke every year, some even suffer from permanent disabilities (Purnama, 2020). The incidence of stroke in Indonesia continues to increase in 2007 there was 8.3 per 1000 population, and in 2013 the incidence of stroke was 12.1 per 1000 population (Marpaung, 2020). Stroke patients experience brain dysfunction resulting in hemiparesis, which has an impact on decreasing physical mobility. As a result of prolonged bed rest, the integrity of the skin will be damaged and decubitus wounds will form (Purnama, 2020).

Various studies in the United States show that 3% - 10% of hospitalized patients suffer from decubitus ulcers, and there is a 2.7% chance of developing a new decubitus ulcer. Cases

in Indonesia reported by Cipto Mangunkusumo Hospital have 20% decubitus sufferers. Meanwhile, at Dr. Sardjito Hospital Yogyakarta, 40% of stroke patients found that 88.8% experienced decubitus in immobilized patients after three days of hospitalization (Purnama, 2020).

Stroke patients are immobile, that is, patients who have limited movement and can only lie down without being able to change their position. Efforts to prevent bedsores must be made early and continuously because stroke patients with limited mobility who are only bedridden and cannot move positions for a long time are at high risk of bedsores. Impaired mobility is the most important factor in the onset of pressure sores or decubitus (Purnama, 2020).

Decubitus wounds are very susceptible to various kinds of bacterial infections, both aerobic and anaerobic bacteria. The impact of decubitus wound infection can spread to bone and joint tissue and can cause osteomyelitis, sepsis, and even death. (Alimansur, 2021). Mobility can prevent the occurrence of decubitus wounds in protruding bone areas, to reduce pressure on abrasions caused by old patients in certain sleeping positions (Mahmuda, 2019). In patients who are comatose or awake, mobilization or transfer to bed should begin 24-48 hours after the stroke. All you can do is raise your head, lean right, lean left, raise your legs and arms, and then sit down. If the patient is conscious, the patient can be helped to stand so that it is expected to improve its function.

LITERATURE

Stroke is a condition of brain damage occurring due to reduced blood flow to the brain organs. Blockage of blood vessels in the brain can result in reduced blood flow to the brain. In addition, it may also be caused by rupture of blood vessels in the brain. When the flow of data to the brain is reduced, certain areas of the brain can be damaged (Dharma, 2018). Risk factors that influence the occurrence of stroke include gender, age, education, history of hypertension, blood cholesterol levels, obesity, coronary heart disease, smoking habits, consumption of high-salt foods, and lack of physical activity (Utama, 2022).

Decubitus is local tissue damage caused by compression of soft tissue in protruding bones and prolonged exposure to external pressure. Tissue compression results in the cessation of blood supply to the compressed site, which in the long run can lead to insufficient blood flow, hypoxia, or tissue ischemia, ultimately leading to cell death (Suriadi, 2004 in Mahmuda, 2019). Decubitus ulcers that are not treated properly have the potential

for infection. Preventive measures need to be taken to avoid the formation of bedsores. Prevention can be done through optimal nutritional support, reduction of friction, pressure, pull, and regular position changes, and treatment of the cause of stroke (Amirsyah, 2020).

The role of nurses in reducing decubitus ulcers is very important. Maintaining the integrity of the patient's skin is one of the most important aspects of providing care. Another option is to lie down or sleep on your left or right side. There is a reduced risk of decubitus in non-hemorrhagic stroke patients after mobilization exercises (Mubarrok, 2023). Immediate testing of decubitus ulcer risk factors is needed to determine a mobilization plan and prevent decubitus sores (Alimansur, 2021).

METHOD

The design of this study is a literature review with topics on the mobilization of stroke patients in the prevention of decubitus. The research study uses a literature review protocol on themes including design, sample, variables, instruments, and analysis. The search strategy was carried out on three electronic databases (PubMed, Mendeley, Google Scholar) searched for articles systematically from February – June 2021. The keywords used in the article search are “mobilization” OR “mobilisasi” AND “Patient Stroke” OR “pasien stroke” AND “Pressure Sores” OR “nyeri tekan”. Keywords used in English and Indonesian.

The inclusion and exclusion criteria used in the title and abstract screening process are the implementation of mobilization measures in stroke patients with the results that patients do not have decubitus. The selection process was carried out by two researchers (AF and NM) looking for articles in database search engines with the main keywords used in the study and obtained 100 articles which were then searched for duplication of the title there were 2 articles with the same title. Researchers independently screened eligibility by searching for articles using the PICOS framework tailored to inclusion and exclusion criteria. Then discuss the search results until a final article is found to be summarized thoroughly.

Two researchers conduct research selection by reading all articles and selecting articles that are not suitable and recorded in the selection strategy by evaluating research topics, including design, samples, variables, tools, and analysis. Articles that are declared feasible based on the process and eligibility criteria are then carried out through narrative descriptive analysis to determine the results and discussion in the research. The diagram of the research strategy conducted by the researcher can be seen in Figure 1.

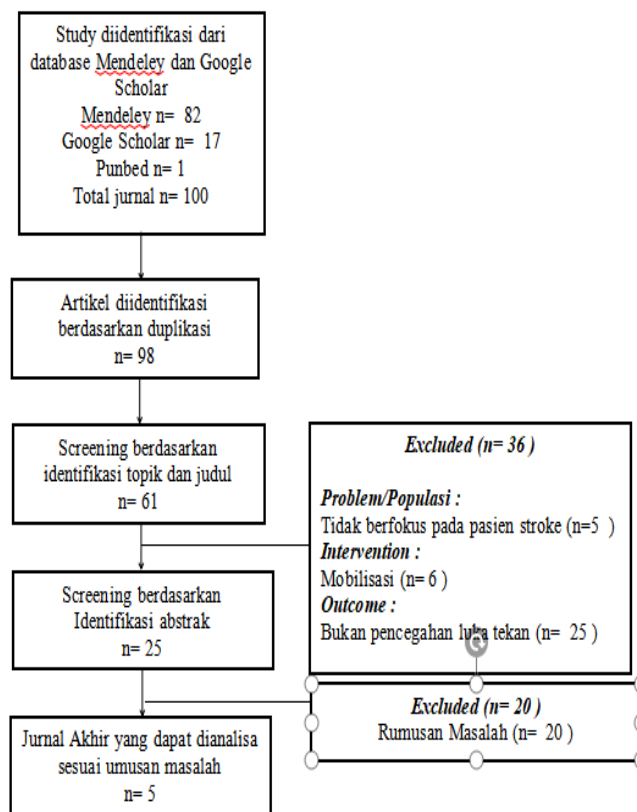


Figure 1 Article search flow diagram

DISCUSSION

Analysis results from 25 articles by the problem statement as many as 5 articles. Most articles use a quasi-experimental approach (80%). The sample used in this study was total sample and accidental sampling, and the instruments used were checklist observation. The data analysis used is independent test T-test, Unpaired t-test, Bivariate with T-test, Man U Whitney test, and Wilcoxon test. Characteristics of mobilization in right-left oblique stroke patients, there are 2 articles. One article tilted right-left and gave a spread of olive oil.

Mobilize the sleeping position on a 30-degree side every 2 hours. There are 3 articles. One article compared a sleeping position on a 30-degree side to a 90-degree tilt. The results showed that a 30-degree lying position was more effective in preventing decubitus wounds than a 90-degree lying position. The right and left tilted positions are the positions of the patient lying on the bed to reduce pressure and prolonged friction on the skin, and prevent pressure sores from forming. The application of right oblique and left oblique muscle movements is effective in preventing pressure sores, especially in stroke patients (Vivin, 2020).

Olive oil can increase skin moisture by about 20% - 40%. The mixture of aloe extract in olive oil is effective for repairing or maintaining skin moisture (Ayu, 2021). Giving olive

oil during right and left-side mobilization procedures in stroke patients can help prevent ulnar ulcers (Meliza, 2020). A 30-degree tilt is one of the measures that can be given to prevent decubitus. A 30-degree tilt position can minimize skin pressure, friction, and tissue tearing (shear) as well as oxygen circulation to the peripheral parts of the protruding bone area. This 30-degree position can maintain the patient's position without applying pressure to the trochanteric major and sacral areas of the psoas muscle, improving the patient's oral drainage and preventing choking.

A 30-degree tilt position exerts minimal pressure on the body. The 30-degree lying position is done once every 2 hours because areas that are under pressure for more than 2 hours will interfere with the circulation of body fluids and oxygen to the tissues. A 30-degree lying position can be achieved by placing the patient's body in the center of the bed and using pillows to support the head and neck. Next, place the pillow at an angle between the buttocks and the mattress, while tilting the hips. However, it is different from other studies that state that tilting 90 degrees is more effective than tilting 30 degrees (Simanjuntak, 2020).

CONCLUSION

From the literature review study of the application of mobilization measures in stroke patients in preventing decubitus, it can be concluded that mobilization actions are useful in preventing and reducing the degree of decubitus, improving blood circulation to accelerate wound healing, and maintaining muscle tone and body functions. Mobilization actions are given to stroke patients in the form of changes in right-left tilted positions and changes in tilted positions of 30 degrees. This position change can be done every 2 hours. The use of olive oil is effective for repairing or maintaining skin moisture in a right-left tilt or 30-degree tilt action helps prevent ulcers of decubitus. Recommendations for patients with bed rest who are hospitalized or at home need to be mobilized every 2 hours and to maintain skin moisture need to be smeared with olive oil. to prevent decubitus ulcers.

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