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NURSING ANALYSIS OF STROKE PATIENTS WITH PHYSICAL MOBILITY DISORDERS PROBLEMS WITH RANGE OF MOTION EXERCISE INTERVENTIONS IN GARDENA ROOM RSD DR. SOEBANDI JEMBER

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ABSTRACT

Introduction: Blooding in the brain leads to inadequate supply within the brain, resulting in an infarction of the cerebral tissue, which affects the surrounding nerves, leading to a loss of muscle strength and physical weakness. **Purpose:** Giving range of motion therapy after stroke provides changes in the sensory and motor cortex by improving motor function in the patient. **Methods:** This exercise is given once ever y shift with a duration of 10 to 15 minutes in 3 days, showing an increase in muscle strength and range of joint movement in the upper and lower left extremities. **Discussion:** Range of motion is one form of rehabilitation that is considered quite effective in preventing permanent disability in stroke patients. This exercise contains a set of movements that focus on the joints so that they can improve muscle flexibility and strength. **Conclusion:** By administering range of motion exercise therapy to stroke patients with physical mobility impairment, the desired outcome criteria can be achieved, namely an increase in muscle strength and range of extremity movement.

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INTRODUCTION

Stroke or cerebrovascular injury (CVA), is an abnormal function of the central nervous system (CNS) caused by a disruption of cerebral blood flow. In Esti and Johan (2020) it is understood that stroke is a deficit of the neurological system that has a sudden and immediate decline within 24 hours. Stroke is a deficit syndrome in the neurologic system that has a clinical definition associated with the presence of vascular injury such as infarction or bleeding from the central nervous system. (Murphy dkk, 2020). Stroke is the second- largest cause of death and is not a single disease but can be caused by a variety of risk factors and disease processes.

Globally, strokes caused by vascular rupture and blood vessel blockage are the second- highest cause of death after heart disease. The most frequent cause of stroke is hypertension. There are approximately 12.2 million individuals worldwide suffering from stroke. Of the total, 16 percent of the cases were in the 15-49 age group and 62 percent in the under-70 age group. The highest incidence of stroke was in the female population (53 percent), while the remaining 47 percent were among the male population.

According to the 2018 Health Survey conducted by the Ministry of Health of the Republic of Indonesia, there are 6.5 million stroke deaths per year. East Kalimantan Province became the province with the highest rate of stroke in all of Indonesia, with the presence of 14.7% of the total population, or about 9,696 people (Raehana, 2022).

Blooding in the brain can cause compression, shift, and separation of adjacent brain tissue, thus leading to brain

edema, cerebral infarction, and possibly cerebral hernia. (Hui dkk., 2020). Blooding in the brain leads to inadequate intake of the brain, causing infarction of the cerebral tissue, which affects the surrounding nerves, such as pressure on the XI nerve, which causes the loss of muscle strength and physical weakness. A cerebral infarction that occurs in the right hemisphere of the brain will affect the occurrence of left hemiparesis, whereas a heart attack in the left hemisphere will influence the occurrence of right hemiparasis. Hemiparesis becomes a common case when there is a hemorrhage to the brain.

Range of motion is one of the therapies that can be given to stroke patients with hemiparesis, as it will improve the maintenance of flexibility and joint mobility, the return of the patient's ability to move extremities, and smooth blood flow. With the administration of range of motion therapy, patients with stroke with hemiparesis are expected to improve and restore joint mobility so that they can perform their activities independently as before.

METHOD

This method uses a case report, where the case report is a report of a case found in a hospital and then disaggregated into a sub-report of the presented case. At the initial examination, the patient complained that his left hand could not be moved. The results of a CT scan of the head without contrast showed the results of intracerebral hemorrhage in the right parietotemporalis lobe, accompanied by mild perifocal edema and a long infarction of the left radiate corona. The therapy given to the patient is range-of-motion exercise. These exercises are given once per shift with a duration of 10 to 15 minutes in 3 days and a pattern of neck, shoulder, elbow, wrist, fingers, pelvis, knees, ankles, and toes.

RESULT

Range of motion exercises given once per shift with a duration of 10 to 15 minutes over 3 days showed a significant increase in the degree of muscle strength. On the first day of the training, on January 15, 2023, at 05.07 PM before the exercise, the researchers measured muscle strength first with the result that the strength of the muscle was at degree 1, or there was a muscle contraction but no movement of the joints with the range of shoulder movement at 0°, elbow at 0°, wrist at 0°, fingers at 45°, hips at 0°, knees at 0°, and toes at 60°. The researchers then performed the training range of passive motion because the patient had not yet been able to move the limbs independently. After exercising for 10 to 15 minutes, the researchers again measured the patient's muscle strength, with the result still at degree 1. The next day, on January 16, 2023, at 08.04 PM, before giving the range of motion exercise, the researchers re-measured the degree of muscle strength of the patient with the result of the muscle force at 3 degrees, or the patient can perform ROM fully against gravity but cannot resist pressure with the shoulder range of 180°, elbow 150°, wrist 80°, thumbs 90°, hips 120°, knees 120°, and toes 60°. Then the patient was given range of movement training for 10 to 15 minutes, with the final result after giving therapy being the strength of the muscles at 3 degrees. On the third day, January 17, 2023, at 16.04 pm, the patient's muscle power is at 4 degrees, or can do ROM fully and can fight moderate pressure with shoulder range 180°, wrist 150°, thump 80°, wrists 90°, thigh 120°, knot 120°, thype 120°, and fingers 60°. The training is given for a duration of about 10 to 15 minutes. After that, the researchers reassessed the patient's muscle strength with a grade 4 muscle force result to see if she could perform a full ROM and be able to fight moderate pressure.

DISCUSSION

Blooding in the brain can cause compression, shift, and separation of adjacent brain tissue, thus leading to brain edema, cerebral infarction, and possibly cerebral hernia. (Hui dkk., 2020). Blooding in the brain leads to inadequate intake of the brain, causing infarction of the cerebral tissue, which affects the surrounding nerves, such as pressure on the XI nerve, which causes the loss of muscle strength and physical weakness. A cerebral

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Range of motion is one form of rehabilitation that is considered quite effective in preventing permanent disability in stroke patients. (Rahmadani, 2019). This exercise contains a set of movements that focus on the joints so that it can improve muscle flexibility and strength. The range of motion exercises given as soon as possible to stroke patients are also effective in improving motor function within 3 months of the event. (Hosseini dkk, 2019).

Giving range of motion training to patients with physical mobility impairment and stroke once every shift with a duration of 10 to 15 minutes in 3 days resulted in a very significant increase in the degree of muscle strength. Range of motion improves joint movement and function as well as muscle tone. These exercises are also useful for improving the physical and mental health of stroke patients by relieving pain, cramps, dizziness, stress, and relaxing the body. (Sjattar dkk, 2021).

CONCLUSION

Range of motion is one form of rehabilitation that is considered quite effective in preventing permanent disability in stroke patients. (Rahmadani, 2019). This exercise contains a set of movements that focus on the joints so that they can improve muscle flexibility and strength. The range of motion exercises given as soon as possible to stroke patients are also effective in improving motor function within 3 months of the event. (Hosseini dkk, 2019).

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