

Nursing Care for Homeless Patients with Hemorrhagic Stroke at A Public Hospital

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ABSTRACT

A hemorrhagic stroke occurs when a blood vessel in the brain bursts, causing bleeding in the brain tissue. A hemorrhagic stroke can have a significant impact on the patient. Family support has been shown to influence the success of treatment for hemorrhagic stroke patients. Therefore, Family support is substantial and linked to achieving patient independence. Homeless stroke patients typically receive minimal care and have high mortality rates. This paper aims to review the implementation of care for homeless patients with hemorrhagic stroke in a public hospital in Jakarta. This article is a case report of a homeless 65-year-old man with decreased consciousness who was diagnosed with hemorrhagic stroke. The data were obtained by physical assessment. Several diagnostic tests were performed, including CT scan, MRI, and blood tests. A student nurse working one shift per day provided nursing care for three days. The patient had limb paralysis and drowsiness. The priority diagnoses were ineffective cerebral tissue perfusion, impaired physical mobility, and deficits in self-care. Nursing care focuses on the patient's consciousness and fulfilling basic needs. After 3 days of care, the patient was still unconscious. However, there were no symptoms of increased intracranial pressure. Family participation is necessary for the care of patients with hemorrhagic stroke. The nurse's role as a caregiver becomes primary and crucial for homeless patients who have no family.

Keywords: homeless patient, hemorrhagic stroke, nursing care

INTRODUCTION

Stroke is a condition of blockage (occlusion) or rupture (rupture) of brain blood vessels, which results in part of the brain not getting the necessary oxygen supply from the bloodstream and thus experiencing cell or tissue death (Ministry of Health of the Republic of Indonesia, 2019). Blockage of blood vessels will cause ischemic stroke, while rupture of blood vessels will cause hemorrhagic stroke (Lee, 2018). Stroke is the second cause of death after cardiovascular disease and the third cause of disability in the world (Ministry of Health of the Republic of Indonesia, 2019). Data shows that there are 13.7 million cases every year (Lindsay et al., 2019). Of these cases, 5.5 million of them died, and the remaining 8.2 million experienced disability. Stroke is considered a severe condition and must be handled seriously; if it is not treated quickly, stroke can result in disability and even death.

Stroke has a significant impact on the patients. Disabilities that occur in post-stroke patients can cause decreased productivity due to their inability to carry out basic activities or experience lifelong dependence. Thus, stroke patients will need other people around them to help with their daily activities. In this case, the role of the family is vital. So, it is expected that stroke will impact those who care for the patient, especially the family. Some effects experienced by patients' families include feeling tired in caring for the patient, especially if the family has a knowledge deficit, increased workload and finances, and limited social life, which can give rise to emotional stress (Muthucumarana & Samarasinghe, 2018).

Previous studies show that family support is significant for stroke patients. Family supports are needed to improve the quality of life of stroke patients (Fiscarina et al., 2023). Family emotional support is the most meaningful support for stroke patients during recovery (Fiscarina et al., 2023; Khairunisa & Fitri, 2023). Moreover, there is a very significant relationship between family support and the independence of stroke patients (Setyoadi et al., 2018). Research highlights that homeless stroke patients have a high mortality rate because they tend to receive minimal care (Wadhera et al., 2020). In this regard, it is recommended that stroke patients who are homeless need to get immediate help to prevent disability. Otherwise, it will become a lifelong burden (Asaithambi et al., 2021). The absence of family makes the role of nurses more significant in a patient's health restoration. Nurses play an essential role in meeting patients' daily needs, preventing patients from experiencing recurrent strokes and minimizing post-stroke disability. This challenge and an outcome must be achieved (Corless et al., 2017; Miyawaki et al., 2021). Nurses are health workers who are relied on to care for stroke patients without family.

To the author's knowledge, no scientific articles provide an overview of the implementation of nursing care for stroke patients who are homeless in Indonesia. This case report aims to provide an overview of the implementation of nursing care for hemorrhagic stroke patients who have no family. The scope of implementation of nursing care starts from assessment, nursing problems, planning, implementation, and evaluation.

METHODS

This scientific work is a case report on the implementation of nursing care for a homeless patient who suffered a hemorrhagic stroke and was in a state of somnolence. The report provides an overview of the nursing care provided by a student nurse for three days. The student nurse was responsible for one shift per day. Assessment data was obtained through physical

examination and diagnostic examinations such as CT-Scan, MRI, and blood laboratory tests. Objective data was obtained due to the patient's consciousness and lack of family. As a result, psychosocial data such as the patient's coping mechanisms and belief value system were not collected.

RESULTS

Assessment

The patient is a homeless man aged around 65 years, with a hemorrhagic stroke as the medical diagnosis. The government social services officer in Jakarta found the patient and was sent to the hospital. The patient had undergone a craniotomy two months before nursing care when this case report was carried out by the nursing student (AG). The patient underwent treatment in the High Care Unit (HCU) for one month and three days.

The assessment data showed that the patient was somnolence (E2M3V2). There was a scar that resulted from a craniotomy surgery he underwent two months ago, and he also found grade III decubitus on the heel of the patient's left foot. The patient's blood pressure was 140/73mmHg, MAP 95.3 mmHg, pulse 61 times/minute, heart rate 61 times/minute, breathing 20 times/minute with regular rhythm and vesicular breath sounds, and temperature 36.4°C. Dry and chapped lip mucosa; dirty mouth and lots of plaque; There was an unpleasant odor from the patient's mouth. The results of the CT-Scan examination showed intracerebral hemorrhage. Thoracic CT-Scan showed no infiltrates, but fibrosis appeared in the right lung. Some abnormal blood tests found, namely Hb 8.3 g/dL; Ht 24.8%; Leukocytes 11.13*) 10³/μL; Platelets 434 μL; Albumin 2.5 g/dL; Na 133 mEq/L. The results of the physiological reflex examination were as follows: Biceps (-), Triceps (-), Patella (-), Asiles (-), no neck stiffness and pathological Babinski reflex were found. The patient experienced hemiplegia of the left upper and lower extremities and hemiparesis of the right upper and lower extremities. Therefore, to meet his basic needs, the patient was fully assisted by nurses.

Nursing Diagnosis

Several nursing problems related to stroke were found: (1) ineffective cerebral tissue perfusion (D.0017); impaired physical mobility (paralysis) (D.0054); self-care deficit (D.0109); risk of aspiration (D.0006). Several nursing problems arise as a result of stroke conditions and long periods of treatment, namely impaired skin integrity (D.0129) and risk of infection (D.0142).

Some goals are achieving adequate cerebral perfusion, increased physical mobility, patient self-care fulfilled adequately, and the patient did not experience aspiration.

Nursing Intervention

The nursing care implementation focuses on actions that can increase and maintain cerebral tissue perfusion and minimize complications and permanent disability in patients. Regarding ineffective cerebral tissue perfusion, the nursing interventions carried out were: observation of the patient's vital signs, level of consciousness, Capillary Refill Time (CRT), as well as symptoms of increased intracranial pressure (ICP), as well as carrying out therapeutic measures such as providing a calm environment for the patient. The patient was given a semi-fowler's position. Collaboration is also carried out in terms of administering fluids and medication. To maintain hydration, patients receive Ringer Lactate therapy 20 drops per minute. The patient received anti-hypertension therapy such as Amlodipine 1x10mg, Candesartan 1x32mg, Clonidine 3x0.5 cc (IV), and Concor 1x0.5 mg. Apart from that, the patient also received osmosis diuretic drugs such as mannitol 4x125 cc and HCT (Hydrochlorothiazide) 1x25mg. The patient also received several vitamin supplements: SF (Ferrous Sulfate) 2x1gram, As folate 2x1mg, B Complex 2x1 tablet, Prov D3-1000 1x1 tablet.

The interventions for physical mobility disorders involve administering and changing positions every 2 hours, performing passive ROM for an average of 15 minutes in 1 session, doing it at least once a day, and monitoring muscle strength. Handling self-care deficits involves bathing the patient, oral care, and toileting. The nurse changes the patient's diaper when bathing the patient or if the patient defecates. About the damage to skin integrity and the risk of infection, include daily wound care. Wound care procedures are carried out in collaboration with the room nurse.

Evaluation

The patient did not show any significant changes within three days of treatment. The patient's consciousness was the same, and there was no decrease in the patient's Glasgow Coma Scale. However, blood pressure is not yet stable and fluctuates. Cerebral tissue perfusion problems have not been resolved. However, there are no signs or symptoms of increased Intracranial. Management interventions for increased intracranial pressure must continue.

Only on the third day of treatment were the patient's physical mobility problems resolved. The patient is still lying weak and paralyzed in the left and upper lower right extremities. Fulfillment

of basic needs was assisted in total by nurses. So, passive ROM (Range of Motion) training interventions and position changes still need to be continued.

Evaluation of the patient's self-care showed improvement. This was proven by the fact that odor and dirt were gradually reduced along with daily routine oral care. Nurses must continue to maintain patient hygiene to prevent infection.

DISCUSSION

Providing nursing care for hemorrhagic stroke patients who do not have a support system, the family has its challenges. According to Doenges (2018), before discharging a hemorrhagic stroke patient, it is necessary to ensure that cerebral function is stable; daily activities can be fulfilled with or without the help of others. Maintaining cerebral function is essential, as increased ICP can lead to recurrent strokes and even death (Doenges, 2018; Hartati, 2020). Furthermore, assisting patients in activities of daily living and endeavoring their independence is also a matter of concern (Doenges, 2018). This certainly requires a long time and great dedication for the caregivers.

Kim and Bae (2017) suggest that therapy for hemorrhagic stroke patients should include managing blood pressure, glucose, temperature, thromboprophylaxis, and seizures. Mannitol therapy can be used to prevent an increase in intracranial pressure (ICP) due to cerebral edema. Mannitol has been shown to improve the level of consciousness through the reduction of brain edema and the increase of cerebral blood flow (CBF) and cerebral perfusion pressure (CPP) (Jefrianda et al., 2021). Mannitol is often administered with concomitant medications such as anticoagulants and antihypertensives.

Stroke patients often experience immobility, which can lead to disability if left untreated. Bleeding in the brain parenchyma can cause compression of the cranial nerves responsible for the patient's motor skills (Doenges, 2018; Lee, 2018), leading to muscle stiffness, contractures, and an increased risk of atrophy and venous degeneration. Muscle stiffness, contractures, and an increased risk of atrophy and Deep Vein Thrombosis (DVT) (Hartati, 2020; Ministry of Health of the Republic of Indonesia, 2019; Silalahi, 2019). The risk of muscle atrophy, joint stiffness, and deep vein thrombosis (DVT) in patients can be reduced by passive range of motion (ROM) exercises. ROM training is an effective form of exercise in the rehabilitation process. It helps prevent disability in stroke patients (Silalahi, 2019). Changing the patient's position is also necessary to reduce the risk of ischemia and tissue injury. According to

Doenges (2018), the affected side has reduced circulation and sensation. This makes it more susceptible to skin damage and pressure ulcers.

Self-care deficits are a primary concern for nurses. Bathing is an effective way to reduce the number of microorganisms on the skin. This reduces the risk of infection. Research has shown that oral hygiene is often overlooked when rehabilitating stroke patients, making oral care crucial in preventing complications such as aspiration pneumonia (Sinha et al., 2021). Scientifically, the mouth is cleaned by the tongue and saliva, but if these do not function properly, it can lead to infections in the oral cavity (Makinuddin, 2020). Studies have shown that good oral hygiene practices can help manage oral disorders such as xerostomia and halitosis in hospitalized stroke patients (Adi, 2018; Setiawan, 2021). In stroke patients, infection is a major life-threatening complication, making hygiene a vital issue (Simats & Liesz, 2022).

Impaired skin integrity can lead to infection and must be addressed promptly. The patient has a urinary catheter (dower catheter) installed. Incontinence is common in stroke patients, particularly in older patients and those with more severe strokes (Cruz et al., 2023). Urinary incontinence occurs when the brain cannot respond to signals from the nerves that control the bladder, resulting in loss of bladder control. It can increase the risk of developing incontinence-associated dermatitis (IAD) and pressure ulcers.

Patients with stroke are at risk of developing pressure ulcers during their treatment due to impaired motor function. To motor function results in prolonged bed rest (Amirsyah et al., 2020). However, according to a study conducted at Muntilan Regional Hospital, the family can be crucial in preventing pressure ulcers in stroke patients (Elmawati, 2019). Patients without family have a higher risk of developing pressure ulcers due to the absence of family members in prevention.

As care providers, nurses play a crucial role in controlling the incidence of pressure ulcers, the risk of injury and patient death, and other stakeholders who interact with patients 24 hours a day (Mirwanti et al., 2017; Wildani et al., 2023). The nurse's role is considered to be influential in the control of the incidence of pressure ulcers in the hospital setting (Mugiarti, 2022). Mirwanti et al. (2017) suggest that the shortage of nursing staff can hinder injury prevention. Therefore, good human resource management is necessary when dealing with homeless patients. Workload analysis is needed to provide comprehensive care and to determine primary and team allocation methods across the continuum of patient care (Afandi et al., 2022; Ananta

& Dirdjo, 2021; Silaban & Sitorus, 2021). This is especially true when patients are unaccompanied. To ensure continuity and direct interaction of nurses when repositioning every 2 hours, caring for the patient's integument, monitoring nutrition, and observing the patient's condition, it is recommended that the nurse's workload be adjusted to the level of patient dependency. This is particularly important in efforts to prevent and treat pressure ulcers. The sources cited (Marina et al., 2022; Syakura, 2022; Syapitri et al., 2017) support this recommendation. Nurses play a crucial role in the care of stroke patients. This is especially true for those without family support. Advocacy and specific policies are needed to ensure that homeless stroke patients receive appropriate care in the hospital setting (Wadhera et al., 2020). When family presence is not possible, the presence or absence of adequate nursing staff becomes essential.

CONCLUSION

Patients with hemorrhagic stroke who are unconscious and have limited mobility require extensive treatment over a long period. The care of this type of patient requires high commitment from all healthcare personnel, particularly nurses, who provide 24-hour service to patients. This case report highlights the importance of family support in recovering hemorrhagic stroke patients, particularly in optimizing exercise, which helps increase blood flow and support muscle metabolism. Family support is also essential to provide moral support to the patient. For neglected patients with no relatives, the role of nurses as caregivers is primary and very meaningful to patients. Therefore, managing nursing resources in a hospital is very important to support the booming quality of patient care.

LIMITATION

This case report has limitations that may affect the quality of nursing care for the patient. The subjective data could not be obtained from the patient because the patient was unconscious. Finally, this case report might not describe the comprehensive nursing care given to the patient because this article only captures the nursing care within three days.

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