

Nursing care for clients with cerebrovascular accident

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Abstract:

Nursing care for cerebrovascular accident (CVA) clients aims to fulfill basic human needs through a comprehensive nursing process—assessment, diagnosis, intervention, implementation, and evaluation—in patients with localized or global neurological dysfunction caused by cerebral infarction. This study aimed to provide nursing care to clients with CVA infarction in the stroke unit of Dr. Soedomo Trenggalek Regional General Hospital. A qualitative descriptive case study was conducted using interviews, observations, physical examinations, and documentation. Findings revealed discrepancies between theoretical nursing care standards and clinical practice, particularly in aspects of medical history, sensory and cognitive assessments, and cranial nerve evaluation. Identified nursing diagnoses included risk for cerebral perfusion impairment related to hypertension, impaired physical mobility due to decreased muscle strength, and impaired verbal communication related to dysarthria. Appropriate nursing interventions were crucial for accelerating recovery and improving the quality of care to prevent complications.

Keywords:

cerebrovascular accident; stroke; nursing care; infarction; qualitative case study

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INTRODUCTION

Cerebrovascular accident (CVA), or stroke, is a sudden neurological deficit resulting from disrupted cerebral blood flow due to thrombosis, embolism, or hemorrhage. Ischemic infarction accounts for nearly 87% of all stroke cases globally (Campbell et al., 2019). Stroke remains a major cause of death and disability worldwide, with over 12 million new cases annually (World Health Organization [WHO], 2023). In Indonesia, the national prevalence of stroke among individuals aged ≥15 years was 10.9% in 2019, equivalent to over 2 million cases (Ministry of Health, 2020).

CVA infarction occurs when a cerebral artery is occluded, leading to oxygen deprivation, tissue necrosis, and neurological impairment (Patel et al., 2022). Clinical manifestations include hemiparesis, dysarthria, facial asymmetry, and loss of coordination. Beyond physical symptoms, stroke affects emotional and social dimensions, necessitating holistic nursing care. Nurses play a

crucial role in stroke management, monitoring neurological status, preventing complications, optimizing cerebral perfusion, and facilitating rehabilitation (Pan et al., 2020).

Despite standardized clinical guidelines, variations in nursing practice persist, especially in low-resource settings. Studies have identified inconsistencies in assessment, mobilization, and education for stroke patients (Alharbi et al., 2023). Therefore, this study aims to describe the nursing care process for a client with CVA infarction at Dr. Soedomo Trenggalek Regional Hospital and to analyze the gap between theory and practice in clinical implementation.

METHODS

This study employed a qualitative descriptive design using a case study approach. The research was conducted in the Stroke Unit of Dr. Soedomo Trenggalek Regional General Hospital from March 10 to April 17, 2025. Data were collected through structured interviews, observations, physical examinations, and documentation reviews. Instruments included interview guides, observation sheets, and medical tools such as sphygmomanometers and thermometers.

Data were analyzed descriptively through thematic categorization. Primary data were collected through patient interviews and direct assessments (inspection, palpation, auscultation, percussion), while secondary data were obtained from medical records and laboratory reports. Ethical considerations were addressed by maintaining confidentiality and obtaining informed consent.

RESULTS

This case study was conducted on a 64-year-old female client diagnosed with Cerebrovascular Accident Infarction (CVA) and admitted to the Stroke Unit of Dr. Soedomo General Hospital, Trenggalek. She was referred to the stroke unit. The client presented with sudden onset of symptoms: slurred speech (dysarthria), right-sided hemiparesis (weakness in the right hand and leg), and dizziness. Upon admission, her vital signs showed high blood pressure (149/92 mmHg), normal temperature (37°C), pulse rate (95 bpm), respirations (20 breaths/minute), and oxygen saturation (99%). Interventions focused on managing intracranial pressure (ICP), maintaining optimal blood pressure, ensuring bed rest with the head of the bed elevated 15-30°, and administering prescribed medications such as Citicoline and Ranitidine. After three days of consistent nursing care, the client's headache complaints decreased. Her blood pressure also improved from 149/92 mmHg to 126/72 mmHg. However, verbal communication remained impaired, and the client continued to exhibit

moderate weakness. Evaluation indicated some resolution of symptoms, with recommendations for continued ICP management and medication therapy as needed.

DISCUSSION

The client's symptoms and findings are consistent with ischemic CVA presentation. Early nursing intervention—encompassing neurological monitoring, positioning, and hemodynamic management—is crucial in preventing increased intracranial pressure and secondary brain injury (Livesay et al., 2021). Maintaining optimal cerebral perfusion requires careful blood pressure regulation. Evidence suggests that moderate head elevation and timely antihypertensive therapy can prevent cerebral edema and improve perfusion (Pan et al., 2020). Hemiparesis impairs functional independence. Early mobilization and physiotherapy-based nursing interventions enhance muscle tone and recovery (Anggraeni & Widada, 2023). Consistent passive and active range-of-motion exercises are shown to improve circulation and prevent contractures. Dysarthria and aphasia affect quality of life and rehabilitation engagement. Speech therapy and nurse-facilitated communication training have been shown to improve patient outcomes (Alharbi et al., 2023).

The study identified a gap between theoretical frameworks and nursing practice, particularly in comprehensive assessment and structured documentation. Similar findings were reported by Alharbi et al. (2023), who found limited adherence to stroke nursing guidelines in non-specialized hospital units. Therefore, continuous training, the use of standardized care plans (e.g., NIHSS), and interprofessional collaboration are recommended to enhance the quality of nursing care.

CONCLUSION

In conclusion, the nursing care provided to a client with Cerebrovascular Infarction (CVA) in the Stroke Unit of Dr. Soedomo Trenggalek Regional General Hospital demonstrates the crucial role of accurate and comprehensive nursing assessment, timely intervention, and interdisciplinary collaboration in improving patient outcomes. The primary nursing diagnoses addressed included hypertension-related cerebral perfusion risk, impaired physical mobility due to decreased muscle strength, and impaired verbal communication related to dysarthria. Through consistent nursing care, including neurological monitoring, motor function rehabilitation, and speech facilitation, the client demonstrated measurable improvements such as reduced headache intensity, increased muscle strength in the affected limb, and increased verbal responsiveness. These findings support the importance of individualized, evidence-based nursing interventions in managing acute stroke cases.

It is recommended that nurses continue to implement a structured clinical pathway for CVA infarction, collaborate closely with physiotherapists and speech therapists, and involve family members in the rehabilitation process to optimize recovery and reduce the risk of long-term disability.

REFERENCES

- Alharbi, A. M., Alnafisah, M. A., & Alotaibi, M. A. (2023). Nurses' practices in stroke care units: A cross-sectional study in Saudi Arabia. *Journal of Stroke and Cerebrovascular Diseases*, 32(8), 106421. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2023.106421>
- Anggraeni, L. D., & Widada, W. (2023). Nursing care for physical mobility impairments in clients with CVA infarction (Cerebrovascular Accident). *Health & Medical Sciences*, 1(4), 1–10. <https://doi.org/10.47134/phms.v1i4.53>
- Campbell, B. C. V., Khatri, P., & Hill, M. D. (2019). Acute ischemic stroke. *New England Journal of Medicine*, 381(3), 252–263. <https://doi.org/10.1056/NEJMra1814896>
- Livesay, S. L., King Brethour, M., & Lutz, B. J. (2021). Care of the patient with acute ischemic stroke: Nursing best practices. *Stroke Nursing Guidelines, American Heart Association*, 52(3), 1–10.
- Ministry of Health Republic of Indonesia. (2020). *National Health Report 2019: Stroke prevalence in Indonesia*. Jakarta: Ministry of Health.
- Pan, M., Zhu, W., Cai, X., Yi, X., Jin, Y., & Mao, X. (2020). Rehabilitation nursing intervention for acute stroke can improve patients' motor ability and cognitive ability. *International Journal of Clinical and Experimental Medicine*, 13(10), 7313–7321.
- Patel, R., Wilson, D., & Markus, H. S. (2022). Pathophysiology and management of cerebral infarction. *The Lancet Neurology*, 21(2), 162–173. [https://doi.org/10.1016/S1474-4422\(21\)00369-7](https://doi.org/10.1016/S1474-4422(21)00369-7)
- World Health Organization. (2023). *Global report on stroke: Action towards prevention and recovery*. Geneva: WHO.