Research Article

Nursing Diagnosis Frequently Enforced by Nurse to Clients with Ischemic Stroke

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Abstract

Aims : This study is to find out the most diagnoses in stroke patients so that they can arrange appropriate interventions**.**
Design: This study is a retrospective study using the descriptive anaysis.
Methods :. The population of this study were all medical records of patients with stroke in 2018 - 2019 in Installation of Tanjungpura University Hospital. The study sample was selected using a purposive sampling method with inclusion criteria, namely patients with ischemic stroke, active patients undergoing outpatient care. The number of samples used was 100 medical record documents of stroke patients. The method of data collection is carried out by checklist instrument.
Results : The results of the study were 6 nursing diagnoses that were often enforced by nurses in ischemic stroke patients, namely nursing diagnoses of . Impaired physical mobility (59 %), acute pain (24%), activity intolerance (7%), risk for ineffective cerebral tissue perfusion (5%), impaired verbal communication (3%) and impaired skin integrity (2%). However, of the 6 diagnoses, there were 2 nursing diagnoses written that were not in accordance with the labels on the 2015-2017 NANDA, however namely impaired skin integrity (100%) and impaired verbal communication (46%).
Conclusions : It is recommended to increase the socialization of nursing diagnoses so that nurses write a diagnosis according to the diagnosis label used as a reference for writing documentation.

Keywords:
Nursing diagnosis, NANDA, ischemic stroke

INTRODUCTION

The risk of stroke increases due to increased intracranial atherosclerosis with the degree of arterial stenosis (1). Ischemic stroke is a type of stroke that often occurs, when blood vessels in the brain are blocked resulting in a thrombus or plaque embolism (2). Globally, there are 10.3 million new cases of stroke. In 2013, as many as 6.5 million deaths were caused by stroke, nearly 25.7 million patients were able to

pass through the stroke, and 113 million people experienced disabilities due to stroke (3).

Stroke is the third cause of death after heart disease. Each year there are around 700,000 cases of ischemic stroke and there are 100,000 cases of hemorrhagic stroke. In Indonesia, there are approximately 51.6 cases per 100,000 population with a mortality rate at the age of 45-55 years of 15.9% and as much as 23.5% at the age of 65 years. In West Kalimantan, the prevalence of stroke was 8.3% (4). Add in Tanjungpura hospital for stroke cases in 2019 as many as 287 patients

In the condition of ischemic stroke, the extent of the infarct depends on the collateral circulation. Collateral circulation is a status that dynamically maintains cerebral perfusion with pathophysiological changes. Collateral status varies between individuals, such as the severity of the stroke and the effectiveness of reperfusion (5). Good collateral circulation can play a role in protecting brain function and can be a factor in reducing the risk of recurrent strokes, the cause or effect of undergoing medical or endovascular therapy. Smooth collateral circulation can also increase the benefits of endovascular medication in patients with acute ischemic stroke and can significantly reduce hemorrhagic transformation and can reduce the risk of recurrent stroke (1,6,7).

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patients with acute ischemic stroke and can significantly reduce hemorrhagic transformation and can reduce the risk of recurrent stroke (1,6,7). So impaired perfusion tissue cerebral would be written a lot as nusing diagnosis, however that was difference fact in many case (8–10)

Treatment of ischemic stroke patients is a form of care services. Services performed at the hospital are an integral part of the success or achievement of the goals of the hospital itself, and often become a determining factor for the image of the hospital in the eyes of the community. Nursing as a profession in a hospital that is quite potential in organizing quality, in addition to the dominant number of nurses in service hospitals who use problem-solving methods both scientifically through documentation of the nursing process (11).

Documentation carried out in the nursing care process is a display of the behavior or performance of the implementing nurse in providing the nursing care process to patients while being treated in the hospital. Part of the documentation process is the nursing diagnosis that forms the basis for the nurse to make decisions about nursing interventions that are appropriate to the patient's health problem. This must be done by a professional nurse. Views on the application of nursing diagnoses in clinical practice vary, and each health institution uses its own diagnostic summary (12).

The nursing process consists of several stages, namely: assessment, nursing diagnosis, planning, implementation, and evaluation. The assessment is a very important stage, the results of the assessment by the nurse will determine the problem / nursing diagnosis experienced by the patient (13). Nurses have data certain but confused to determine these data support nursing diagnoses wich one. Or conversely, nurses have predict the patient has a certain diagnosis but don't know what data need to be studied in accordance with the characteristic limits on the diagnosis that will be enforced (14).

Nursing diagnosis provides an overview of the existence of problems or client health status that is real (actual) and the possibility of occurring where the solution can be done within the limits of the authority of the nurse. Misdiagnosis can also be detrimental to the patient. Nursing diagnoses are not formulating the existence of a disease but rather examining the bio-psychosocial aspects of the patient, and of course nursing diagnosis and medical diagnosis are interrelated (14).

NANDA as a diagnose standard used globally to maintain patient safety through the use of research evidence-based care. NANDA is also used as a standard for diagnosis in health facilities in Indonesia, including in West Kalimantan. Although Indonesia has had standard nursing diagnoses since 2016, helath facilities in West Kalimantan have not been exposed to the use of Indonesian Nursing Diagnoses and still refer to diagnoses using NANDA.

Nanda is one of the most widely used Standardized Nursing Langueges (SNL) in the word and has been translated into various languages namely bahasa Indonesia, Basque, Orthodox Chinese, Czech, Dutch, English, Estonian, French, German, Italian, Japanese, Portuguese, Spanish (European and Hispanoamerican edition), dan Swedish (15).

METHODS

This research is included in the description research using the document analysis technique approach. This research was conducted by looking at the results of the documentation of nurses in providing nursing care to patients with Ischemic Stroke at the University Hospital Tanjungpura - Pontianak. The study was conducted at the Tanjungpura University Hospital Medical Record Installation on 18 August - 4 September 2020.

The population of this study were all documented medical records of stroke patients at Tanjungpura University Hospital, Pontianak during the period 2018 – 2019. Those times have highest case about ischemic stroke and syncronize to the NANDA 2015-2017 in order to evaluate its implementation . The sample of this study was selected using a purposive sampling. Inclusion criteria in this study is namely patients with ischemic stroke, patients who have been hospitalized are then actively undergoing outpatient treatment. The number of samples used was 100 medical records, while while the exclusion criteria were based on medical record documentation of patients with hemorrhagic stroke, patients with other comorbidities, and patients with congebital defects.. The method of data collection was carried out by checklist instrument.

The variable used was a single variable, namely the suitability of the use of NANDA nursing diagnosis in ischemic stroke patients.

The data collection technique uses a documentation study by looking at the nursing diagnosis, subjective and objective data formulated and documented by the nurse and then re-recorded by the researcher using the existing format. The results of data collection were carried out in three stages, namely checking the completeness of data on the patient's medical record, tabulating data and nursing diagnoses, analyzing the suitability of nursing diagnoses with NANDA diagnosis labels (2015 - 2017)

This research has passed the ethical review of the Ethics Review Team of the Faculty of Medicine. UniversitasTanjungpura Pontianak with Ethics Review Letter Number 3609 / UN22.9 / TA / 2020.

RESULTS

Description of Research Locations
This research was conducted at the Tanjungpura University Hospital having its address at Jalan Prof. Dr. H. Hadari Nawawi Pontianak, West Kalimantan. Tanjungpura University Hospital has a bed capacity of 103 beds divided into 3 classes. Class 1 with

a capacity of 20 beds, class 2 has 24 beds capacity, class 3 has a capacity of 39 beds, and there is an ICU room with 4 beds, an emergency room has 3 beds, and a delivery room with 6 baby boxes and 7 incubators. The nerve room is on the 2nd floor with 12 nurses.

Characteristics of Research Respondents

Table 1. Frequency distribution of respondent characteristics based on age and sex in hospital (n = 100)

Characteristics of Respondents	Percentage of
Gender	
Male	53 %
Female	47 %
Total	100%
Age	
35 – 44 years	4 %
45 – 54 years	21 %
55 – 64 years	39 %
65 – 74 years	24 %
>75 years	12 %
Total	**100%**

The results showed that the characteristics of stroke patients ischemia for age mostly suffered by the age group 55 to 64 years as much as 39% (39 patients), while for gender Most of the clients were male, 53% (53 patients).

Distribution of Nursing Diagnosis in Ischemic Stroke Patients

Table 2. Frequency Distribution of Nursing Diagnoses in Ischemic Stroke Patients (n = 100)

No.	Nursing Diagnosis	Percentage (n)
1.	Impaired physical mobility	59% (59)
2.	Acute pain	24% (24)
3.	Activity intolerance	7% (7)
4.	risk for ineffective cerebral tissue perfusion	5% (5)
5.	impaired verbal communication	3% (3)
6.	impaired skin integrity	2% (2)
Total		**100%**

The results of the study used nursing care documentation made by nurses on the first and second day of patient care in the neurological inpatient room, the results of the observations showed that the nursing diagnosis in the patient with stroke ischemia, most of the diagnosis made was impaired physical mobility as much as 59%, the least diagnosis made by nurses was impaired skin integrity 24%.
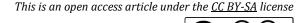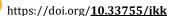
DISCUSSION

The results showed that nursing diagnoses that were often enforced in ischemic stroke patients were mostly physical mobility constraints as many as 59 respondents from 100 nursing care documentation written on the first to the second day of hospitalization. Symptoms are written to diagnose physical mobility impairments with subjective data on the presence of extremity weakness, objective data in the form of general weakness, compos mentis awareness, and measurement results of vital signs.

According to previous research, nursing diagnoses that can appear in stroke patients are Impaired physical mobility, the risk of ineffective brain tissue perfusion, verbal communication barriers, self-care deficits: bathing, dressing, eating, elimination, coping ineffectiveness, swallowing disorders, unilateral body weakness, and knowledge deficiency (16).

This statement is according to previous research that wason stroke patients, it was found that 20 respondents had right hemiparese and 20 respondents had left hemiparese (17). This condition is one of the disabilities that arise due to stroke, namely paralysis (18). Stroke patients with disabilities will experience functional changes in their lives which can lead to dependence. One-third of stroke patients experience long-term disability, one of which is unable to perform activities, so that patients need assistance in their activities due to physical mobility obstacles (19).

Central nervous system ischemia can be accompanied by swelling for two reasons, namely cytotoxic edema (accumulation of water in damaged glial cells and neurons), then vasogenicedema (accumulation of extracellular fluid due to brain blood breakdown). Edema of the brain can cause severe clinical worsening a few days after a major stroke, due to increased intracranial pressure and compression of the surrounding structures (20). If not resolved immediately, it will cause neurological deficits or focal paralysis such as: hemiparesis, which is paralysis of the right or left side of the body, difficulty walking, and loss of balance so that the body will experience obstacles to physical mobility (18).

According to NANDA 2015-2017 in the sub-category of activity/exercise, there are 8 nursing diagnoses, namely the risk for disuse syndrome, impaired bed mobility, impaired physical mobility, impaired wheelchairs mobility, impaired sitting, impaired standing, impaired transfer ability and impaired walking. The impaired physical mobility code (00085) has the definition of limitation in independent, purposeful physical movement of the body or of one or more extrimities. The characteristic limitations include exertional dyspnea, alteration in gait, slowed movement, spastic movements, uncoordinated movements, postural instability, difficulty turning, decrease in range of motion, discomfort, doing other activities as a substitute for movement, decreased ability to perform fine motor skills, decreased ability to perform fine motor skills, decrease in gross motor skills, decrease in reaction time, tremors due to movement. Factors related to neuromuscular impairment (15).

The writing of the nursing diagnosis label carried out by the neuro room nurse of UNTAN Hospital in accordance with the NANDA diagnosis label (2015 - 2017), namely Barriers to Physical Mobility Domain 4: activity / rest, class 2: Activity / Exercise with code 00085 and in accordance with factors related to neuromuscular impairment. The nurse establishes a diagnosis of physical mobility constraints because of the results of the assessment. Most clients complain of weakness in one or both of the limbs, so that the client's activities require assistance from the family or nurses, especially in meeting their basic needs.

The second nursing diagnosis that is often enforced by nurses in ischemic stroke patients is acute pain as many as 24 respondents with details of 10 female respondents and 14 male respondents. With characteristic limitations in the form of subjective data, dizziness, and intermission, feeling weakness in the limbs of a part of the body and objective data on the general state of weakness, awareness of compos mentis, and patient's vital signs.

Pain is often a complaint in stroke patients. Pain can arise in muscles, joints, internal organs, or from the central and peripheral nervous system. The most common types of post-stroke pain are hemiplegic shoulder pain, pain due to spasm or spasticity, headache and central pain after stroke (21).

Previous study shows that there were no significant differences regarding age, gender, history of stroke, or physical examination results between 16 post-stroke central pain patients and 71 patients with somatosensory deficits but without pain. However, there was no age difference between patients who developed central pain after stroke (n = 85) compared with those who did not (n = 120) (Hansen et al., 2012). Furthermore, among subjects with somatosensory deficits, there was no age difference between the 16 patients who developed pain and the rest who did not.

Nursing diagnosis of acute pain according to NANDA (2017) is in Domain 12: Comfort, Class 1: Physical Comfort and code 00132. Definition Acute pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or dencribed in term of such damage (International Association for the

study of pain); sudden or slow onset of any intensity from milde to severe with an anticipated or predictable end.

The writing of the acute pain diagnosis label that was enforced by the nurse was in accordance with the diagnostic label in NANDA. The diagnosis of acute pain is made due to patient complaints who complain of dizziness, or pain in certain muscle areas. High blood pressure results in increased pressure on the blood vessels to the brain so that patients complain of dizziness or tension pain. However, in establishing the diagnosis, the nurse does not provide a measurement of the pain scale experienced by the patient, so a more complete assessment is needed.

The third diagnosis that is often enforced by nurses is activity intolerance. From the results of a study of 100 documentation of nursing care in patients with stroke ischemia, 7 diagnoses of activity intolerance were obtained. This diagnosis is confirmed by complaints from patients experiencing weakness.

The diagnosis of activity intolerance in NANDA (2017) is included in domain 4: activity / rest class 4: cardiovascular / pulmonary responses with code 00092. Activity intolerance has the definition of insufficient psychological or physiological energy to endure or complete the required or desired daily activities. According to Marjory (2001), the occurrence of activity intolerance inpatients is the stroke caused by an increase in the workload of the heart muscle so that it can weaken the force of muscle contraction and reduce energy production.

The writing of a diagnosis label for activity intolerance that was enforced by the nurse was in accordance with the diagnostic label in NANDA. Activity intolerance in stroke clients can be enforced because seeing the condition of patients with stroke can experience a response to changes in blood pressure and heart frequency to an activity. The data studied are expected to be in accordance with the characteristic limitations of NANDA.

Diagnosis of impaired cerebral tissue perfusion is the fourth most common diagnosis for ischemic stroke. This diagnosis was enforced by the nurse because of the characteristic limitations found in patients, namely dizziness, vomiting, and weakness in some parts of the extremities.

According to NANDA (2017), the diagnosis of cerebral tissue perfusion disorders is not included in the NANDA diagnostic label (2015 - 2017), but what is written is the risk of ineffective perfusion of brain tissue. Diagnosis of the risk of ineffective perfusion of brain tissue is in Domain 4: activity / rest class 4: Cardiovascular / pulmonary responses with code: 00201. The definition of the risk for ineffective cerebral tissue perfusion is vulnerable to a decrase in cerebral tissue circulation, which may compromise health. Hypertension is one of the risk factors for ineffective perfusion of brain tissue.

The diagnosis of the risk of ineffective perfusion of brain tissue in NANDA (2017) is still a risk diagnosis that has not become an actual diagnosis. So that the label of writing a diagnosis of cerebral tissue perfusion disorders is not in accordance with NANDA (2015 - 2017). The non-compliance with the NANDA label indicates that the diagnosis made by nurses has not used a standard nursing language that is internationally accepted.

The nursing diagnosis of impaired verbal communication is also a diagnosis that is enforced by the nurse in the nervous room. From the research results, there were 3 nurses who wrote this diagnosis in their documentation. The Diagnosis nursing of impaired verbal communication was enforced by the nurse because most of the patients with ischemic stroke experienced communication problems.

According to NANDA (2015 - 2017), written diagnosis labels are impaired verbal

communication that are in Domain 5: perception/cognition, class 5: Communication with code 00051. The definition of impaired verbal communication is a decrease, delayed, or absent ability to receive, process, transmit, and/or use a system of symbol (15).

One of the causes of verbal communication barriers is neuromuscular disorder. According to literature, ischemia can cause lesions or damage to nerve cells, especially in Broca and Wernicke's areas which causes language disorders (22). The ability to speak is the responsibility of Broca's area, which is located in the left frontal lobe and is associated with the motor cortex area. While the Wernicke area, which is located in the left cortex at the meeting of the parietal, temporal and occipital lobes, is related to language understanding, both written and spoken (23).

From the results of research conducted on documentation written by nurses using the word "obstacle" while in NANDA (2015 - 2017) using the word impaired that means in Bahasa Indonesia "gangguan". The nurse considers that the diagnosis is made easy to understand and familiar to friends in the workplace hospital. However, there is a concern that the use of labels without a reference can cause miscommunication, especially among nurses. Because the hospital is also a place for student learning. This situation will cause confusion for students if they do not use the same reference.

The 6th diagnosis that was enforced by nurses from 100 medical records was impaired skin integrity. The diagnosis of impaired skin integrity in NANDA (2017) is included in domain 11: safety/protection class 2: physical injury with code 00046. Damage to skin integrity has the definition of altered epidermis and/or dermis.

Impairef skin integrity is a condition where the individual has a risk of experiencing damage to the epidermis and dermis tissue in the skin layer. The causes of impaired skin integrity occur due to changes in circulation, decreased mobility, aging processes, hormonal changes, extreme environmental temperatures, and changes in pigmentation (24).

The results showed that the results of the documentation that had been written by the nurse were 2 diagnoses that did not match the NANDA diagnosis label, namely the diagnosis of cerebral tissue perfusion disorders (100%) and impaired verbal communication (46%). This situation can lead to miscommunication and cause confusion among fellow nurses or students who are studying at the hospital. This happens because nurses want to make it easier to be enforced and understood by colleagues in the hospital.

The results of the study still show that some diagnoses do not match the NANDA label (2015 - 2017). This condition is because many respondents are not familiar with the NANDA label (2015 - 2017). One of the influences in writing the diagnosis label is too much self-confidence, the average long work experience allows respondents to feel more confident in diagnosing, while NANDA's taxonomy literature will experience a change in edition (25).
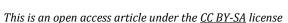
The results of the study still show that there are still nursing diagnoses enforced by nurses that are not in accordance with the NANDA label (2015 - 2017). This condition is because many respondents are not familiar with the NANDA label (2015 - 2017) which continues to be updated every 2 years.

One of the influences in writing nursing diagnosis labels is self-confidence too much, the average long work experience allows respondents to feel more confident in diagnosing, while NANDA's taxonomy literature will experience a change in edition (25).

CONCLUSION

There are still nursing diagnoses that are upheld by nurses that do not match the diagnosis label in the NANDA taxonomy

(2015 - 2017). Writing nursing diagnoses that are not in accordance with the labels on NANDA (2015 - 2017) as in 2 nursing diagnoses of cerebral tissue perfusion disorders, if according to the diagnosis label, it should be written the risk of ineffective cerebral tissue perfusion and nursing diagnoses obstacle of verbal communication which should be impaired verbal communication. Most nursing diagnoses enforced by nurses in ischemic stroke patients are impaired physical mobility.

Hospital management is expected to improve the skills of nurses in formulating nursing diagnoses as well as monitoring and evaluation which can be done qualitatively or quantitatively. Nurses are expected to be able to use nursing diagnoses and planning in accordance with the standard nursing care labels used as guidelines.

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