

NURSING CARE FOR ELDERLY PATIENTS WITH HYPERTENSION AT KATSUREN HOSPITAL JAPAN

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ABSTRACT

According to WHO, approximately 1.13 billion people worldwide suffer from hypertension. Hypertension, which frequently occurs in the elderly, carries the risk of serious complications such as heart disease and stroke. Comprehensive nursing care is needed to effectively manage this condition. This study used a descriptive case study method to evaluate nursing care for elderly patients with hypertension. The established nursing diagnoses were: risk of ineffective tissue perfusion related to uncontrolled high blood pressure, disturbed sleep patterns related to discomfort due to increased blood pressure, and acute pain related to increased blood pressure that causes vascular tension. Implementation included blood pressure modification, pain management, and sleep support. The study results showed that the implementation of nursing interventions for 3 days resulted in a decrease in blood pressure from 160/90 mmHg to 140/85 mmHg, improved sleep quality, and increased patient compliance with antihypertensive therapy. Thus, nursing care that focuses on blood pressure monitoring, therapy compliance, and a healthy lifestyle has been proven effective in improving the quality of life of elderly patients with hypertension.

Keywords: blood pressure; elderly; hypertension

INTRODUCTION

High blood pressure, or hypertension, remains a significant health problem worldwide. This condition is associated with an increased risk of cardiovascular disease, which is among the top 10 causes of death (Yani and Patrecia, 2022). Hypertension is more common in the elderly due to the aging process, which leads to decreased physical activity (Kusuma, 2021). This disease is often detected without obvious symptoms, and sufferers are unaware they have hypertension until they undergo a blood pressure check (Marbun and Hutapea, 2022).

The high prevalence of non-communicable diseases (NCDs), one of which is hypertension, is not unique to Indonesia but occurs worldwide. The World Health Organization (WHO) records that approximately 40 million deaths worldwide are caused by non-communicable diseases (NCDs) each year (Ministry of Health, 2022). An estimated 1.28 billion adults aged 30-79 worldwide suffer from hypertension, the majority (two-thirds) of whom live in low- and middle-income countries. An estimated 46% of adults with hypertension are unaware that they have the condition. Less than half of people Adults (42%) with hypertension are diagnosed and treated. Approximately 1 in 5 adults (21%) with hypertension have it under control. Hypertension is a leading cause of premature death worldwide. One of the global targets for non-communicable diseases is to reduce the prevalence of hypertension by 33% between 2010 and 2030. (World Health Organization, 2021).

This case study was conducted at Katsuren Hospital, Japan, a nursing home that cares for the elderly. There were 50 elderly patients in one room, consisting of 20 men and 30 women. The elderly ranged in age from 60 to 97. Efforts to control blood pressure in the elderly included healthy exercise every morning and afternoon for approximately half an hour. Prior to the exercise, the elderly had their blood pressure measured. This was done in a sitting position. If blood pressure was high, the elderly were given antihypertensive medication as recommended by their doctor. At Katsuren Hospital in Japan, there was a female patient, Mrs. C, who often felt dizzy repeatedly, often feeling pain in her head. pain in the back

of his head, often feels tired quickly if doing excessive activities, does not regularly check his blood pressure, and also has difficulty taking medication. There is no family history of disease. A physical examination found blood pressure of 160/90 mmHg, pulse 86x/minute, respiratory rate 20x/minute, body weight 68 kg and Body Mass Index (BMI) 27.5 (Overweight). In addition to the physical examination, supporting examinations were also carried out with the results of a Lipid Profile showing LDL (Low-Density Lipoprotein) cholesterol levels, and an Electrocardiogram (ECG) showed signs of left ventricular hypertrophy.

METHOD

The case study was conducted based on the patient's treatment dates listed in the hypertension nursing care report, which lasted for three days, from December 14, 2024, to December 16, 2024, in the inpatient ward. Data collection was conducted through direct observation, interviews with the patient and family, and review of the patient's medical records to obtain a comprehensive picture of the patient's condition.

RESULT AND DISCUSSION

Assessment results:

- a. Client Identity. Anamnesis was taken on December 14, 2024, at 8:00 AM WIB at Katsuren Hospital, Japan. A 65-year-old female, Hindu, communicates in Japanese, and is married. Her address is Katsuren Hospital, Japan.
- b. Reason for Admission: The patient complained of sudden dizziness, a severe headache, especially in the back of the head, and fatigue after light activity.
- c. Medical History

- 1) Complaints at the Time of Assessment

The patient arrived at Katsuren Hospital on December 14, 2024, at 8:00 AM with her family in a wheelchair. The patient complained of dizziness and pain in the back of her head, as if a heavy object had fallen on her. The pain came and went with a scale of 4 and lasted for 15 seconds. The client reported having had hypertension for the past two years. The client reported frequently waking up during sleep and having difficulty falling asleep due to the pain.

- 2) Past medical history: The patient reported having had hypertension for the past 2 years.

- d. Daily activity patterns

- i. Nutritional patterns

1. Eating

Before illness: The client reported eating three times a day, with one portion of rice, side dishes, and vegetables. He had no food allergies. He weighed 61 kg and was 156 cm tall. After illness: The client reported eating three times a day with one portion of rice, side dishes, and vegetables. He weighed 61 kg and was 156 cm tall.

2. Drinking habits

Before and after illness, the frequency of drinking remained the same, approximately 1000 ml/day.

- ii. Elimination patterns

Body movements: Once a day with a soft consistency and normal color, no complaints. Urination: Six times a day with a yellowish color, no catheter required.

- iii. Activity and exercise patterns

Table 1.
Activity and exercise patterns

Activity	0	1	2	3	4
Eating and drinking	√				
Bathe	√				
Elimination of urination and defecation	√				
Mobilization in bed	√				

Score:

- 0 : Independent
- 1 : Partially assisted/using assistive devices
- 2 : Needs assistance from others
- 3 : Needs assistance from others and devices
- 4 : Dependent/Incapable

iv. Sleep and Rest Patterns

Before illness: The client reported going to bed at 10 and waking at 6, sleeping soundly, with no sleep disturbances.

After illness: The client reported going to bed at 10 and waking at 4, and complained of frequent awakenings due to pain.

v. Sensory and Cognitive Perception Patterns

Before illness: The client reported experiencing no pain and that all five senses were functioning normally. He did not use glasses or hearing aids. If experiencing pain or discomfort, the client sought medical attention at a health facility.

After illness: The client reported experiencing pain in the back of his head, a pain that felt like being crushed by a heavy object, with intermittent pain, a rating of 4, and lasting 15 seconds.

vi. Role and Relationship Patterns

Before illness: The client reported having good relationships with his family and community and experiencing no problems.

After illness: The client reported no changes in her relationships with her family and the surrounding community. Her relationships remained good and there were no problems.

vii. Stress Tolerance and Coping Pattern

Before illness: The client reported that if there were problems, she always discussed them with her family and managed stress by thinking positively.

After illness: The client reported that if there were problems, she always discussed them with her family and managed stress by thinking positively.

viii. Spiritual History

Before illness: The client reported that she always practiced religious practices according to her beliefs.

After illness: The client reported that she continued to practice religious practices while in the hospital.

This chapter describes a case study of nursing care that fulfills the need for safety through a nursing care approach implemented for Mrs. C, who was diagnosed with hypertension. Nursing care began with assessment, nursing diagnosis, nursing interventions, nursing implementation, and nursing evaluation. This assessment was conducted using the auto-anamnesis method. (direct client interviews), reviewing medical and nursing records.

Assessment

Assessment is the initial and foundational stage of the nursing process. It aims to gather information or data about the client in order to identify and address issues related to the client's health and nursing needs. The assessment is conducted comprehensively based on a nursing assessment model that encompasses the patient's biological, psychological, social, and spiritual aspects. The author conducted the assessment on December 14, 2024, the first day of the assessment. Data collection involved direct observation, interviews/anamnesis with the client, and a physical examination. The assessment results were grouped into subjective and objective data. The identity of the client assessed and provided nursing care for hypertension at Katsuren Hospital is Mrs. C, 65 years old, Hindu, married, housewife, and of Japanese ethnicity. The patient's chief complaint was dizziness. Sudden, severe headache, especially in the back, and fatigue after light activity. The patient's current medical history revealed a diagnosis of hypertension for over five years, with frequently uncontrolled blood pressure due to non-compliance with antihypertensive medication and an unhealthy lifestyle.

Of the 972 million people with hypertension, 333 million live in developed countries, including Japan, while the remaining 639 million live in developing countries. Hypertension is a major chronic disease recognized as a risk factor for cardiovascular disease in Japan. Its prevalence was 34.6% in men and 24.8% in women in 2016 (Ilmia et al., 2021). Seven out of 31 patients (22.5%) were diagnosed with hypertension in the Katsuren Hospital in Okinawa, Japan. Hypertension is common in older adults; as respondents age, heart function and function decline. Blood vessels become stiffer and narrower as blood pressure increases with age due to the buildup of collagen in the muscle layer.

Several physiological changes occur with age; in old age, peripheral resistance and sympathetic activity increase (Purwono et al., 2020). Pharmacological and non-pharmacological therapies can be used to lower blood pressure. Pharmacological therapy includes the use of antihypertensive medications, while non-pharmacological therapies include deep breathing relaxation techniques, guided imagery, and meditation. Relaxation is the feeling of physical and mental freedom from stress or dependency that gives a person a sense of control. Relaxation techniques can be used at any stage of illness or health. Medical support can include physiological or behavioral changes associated with relaxation, such as decreased heart rate, blood pressure, and respiratory rate, increased overall awareness, decreased oxygen demand, feelings of calm, and decreased muscle tension and metabolism. Methods include deep breathing relaxation, guided imagery, and meditation (Cahyanti, 2017).

Nursing Diagnosis

Nursing diagnosis is a crucial step in the provision of nursing care by a nurse. In the nursing process, it is the second step carried out by nurses after assessing the patient (Gustinerz, 2021). Based on the results of the assessment, the nursing diagnosis is established by The author's criteria are acute pain, evidenced by complaints of pain, grimacing, protective behavior, restlessness, increased pulse rate, and difficulty sleeping. Acute pain is a nursing diagnosis defined as a sensory or emotional experience related to actual or functional tissue damage, with sudden or slow onset and mild to severe intensity, lasting less than 3 months.

The second diagnosis is disturbed sleep patterns related to lack of sleep control, evidenced by complaints of difficulty sleeping, frequent awakenings, dissatisfaction with sleep, changes in sleep patterns, and insufficient rest. Disturbed sleep patterns is a nursing diagnosis defined as disturbances in the quality and quantity of sleep due to external factors. The third diagnosis is Risk for Ineffective Cerebral Perfusion, evidenced by head injury. Risk for Ineffective Cerebral Perfusion is a nursing diagnosis defined as being

at risk for decreased blood circulation to the brain.

Nursing Interventions

Nursing intervention plans are designed based on the Indonesian Nursing Intervention Standards (SIKI) and the Indonesian Nursing Outcome Standards (SLKI), taking into account scientific evidence and the patient's specific condition. The following are The intervention plan implemented. Hypertension Management includes monitoring blood pressure every 6 hours to detect changes in the patient's condition, educating the patient and family about the importance of adherence to antihypertensive medication, providing education about a low-salt, high-fiber diet, and the importance of adequate hydration. Pain Management includes assessing pain intensity using a numeric pain scale (0-10), providing training in deep breathing techniques and progressive muscle relaxation to reduce muscle tension. Sleep Pattern Modification includes educating the patient about healthy sleep patterns, including avoiding caffeine consumption at night, encouraging the patient to practice relaxation techniques before bed to improve sleep quality, and evaluating changes in the patient's sleep quality after the intervention is implemented.

The nursing interventions performed on Mrs. C to address acute pain are aligned with the Indonesian Nursing Intervention Standards (SIKI), which are carried out over 3x24 hours using pain management (I.08238) (PPNI, 2017). Actions taken include identifying nonverbal pain responses because pain is often Sometimes it affects verbal communication, especially in patients who cannot clearly explain or express their pain. Identifying nonverbal pain responses, such as facial expressions, body posture, or behavioral changes, helps in a more accurate assessment of pain intensity and location. This ensures that all aspects of pain are identified, even when the patient may not be able to communicate verbally. Identifying Pain Scales Using pain scales, such as numeric or facial scales, helps in measuring pain intensity objectively and consistently.

This is important for evaluating the effectiveness of interventions and monitoring changes in pain levels over time. Obtaining clear data on the patient's pain level allows for better planning and adjustment of interventions. Based on the statement above, the author provides pain management education aimed at increasing the independence of the elderly in identifying the causes, duration, and strategies for pain relief, monitoring pain independently, practicing deep breathing relaxation techniques when pain occurs, reducing activities that can cause pain, and using analgesics appropriately. This makes Mrs. C, a patient with this condition, This is in line with research by Tomy (2017) in (Permatasari, 2021), which found that deep breathing relaxation techniques significantly reduced pain levels in the elderly. The low level of knowledge in the elderly results in limited knowledge about prevention, early protection, and appropriate pain management to improve their health.

Nursing Implementation

Implementation was carried out in accordance with the established intervention plan. The following actions were taken during the treatment period: routine blood pressure monitoring, educating patients and their families about hypertension, including risk factors, stress management, and efforts to prevent long-term complications; encouraging patients to increase light physical activity, such as walking for 15-30 minutes per day to improve blood circulation; conducting relaxation therapy, such as light meditation and breathing exercises, to reduce stress that can exacerbate hypertension; and teaching patients healthy eating patterns by providing examples of balanced, low-salt, and high-fiber daily menus.

According to 2023 data from the World Health Organization, approximately 1.28 billion adults aged 30-79 years worldwide suffer from hypertension, with the majority living in low- and middle-income

countries. An estimated 46% of adults with hypertension are unaware of their condition, and only 42% are diagnosed and receiving treatment. Approximately 21% of adults with hypertension have their condition under control. Hypertension is a significant contributor to premature death globally. One of the global targets for non-communicable diseases is to reduce the prevalence of hypertension by 33% between 2010 and 2030 (World Health Organization (WHO), 2023).

Nursing care is a series of activities provided to clients in various health care settings. The goal of nursing care is to meet basic human needs using the nursing process methodology and guided by nursing standards and ethics. Providing services that encourage individuals or communities to participate in the health sector is within the scope of the nursing authority and responsibility. It promotes independence and helps individuals maintain optimal health. so they don't need to rely on others for their well-being. The primary goal is to help individuals achieve optimal health (Betan et al., 2023).

The nursing process consists of five stages: Assessment, Diagnosis, Planning, Implementation, and Evaluation. This means that quality nursing can be seen from how nurses provide health services to clients and apply them in every nursing action, as well as the systematic delivery of all nursing care (Helga, 2020). According to the International Association for the Study of Pain (IASP), pain is an unpleasant sensory and emotional experience resulting from actual or potential tissue damage, or a condition characterizing such tissue damage. Referred pain is pain felt in a location in the body distant from the source of the pain (Raja et al., 2020). The nursing implementation included identifying pain characteristics, identifying nonverbal pain responses, identifying the pain scale, and implementing the nursing strategies used by the author in providing nursing interventions, specifically to address Mrs. C's primary nursing problem, namely progressive muscle relaxation. Reducing pain. The mechanism of progressive muscle relaxation focuses attention on muscle activity by identifying tense muscles and then reducing tension through relaxation techniques to achieve a feeling of relaxation. Therefore, progressive muscle relaxation therapy offers numerous benefits for the body. This therapy can be performed independently and easily without side effects (Ekarini et al., 2019).

Based on a review of published articles on the relationship between sleep disturbances in the elderly and hypertension, it can be concluded that there is a close relationship between the two. Poor sleep patterns can increase the risk of high blood pressure in the elderly. Untreated sleep disturbances can impact quality of life. Techniques used to address this include non-pharmacological therapies for sleep disorders, such as relaxation therapy, which can be performed through music therapy. The effects of music therapy indicate that music can influence a person's tension or state of relaxation by stimulating the release of endorphins and serotonin, which can promote relaxation (Finasari, 2014). One study conducted by the study found that music therapy, tailored to the elderly's preferences, lasted for 30-60 minutes until the elderly fell asleep within 5 days. Researchers documented the elderly's responses after receiving music therapy the following day and evaluated them using observation sheets before and after the music therapy.

The nursing interventions implemented after the diagnosis of cerebral perfusion risk were ineffective, including hypertension exercises. Hypertension exercises are exercises indicated for hypertension sufferers and the elderly to reduce weight and manage stress (a factor that increases hypertension). They are performed for 30 minutes at least twice a week (Sherwood, 2005, cited in Totok and Rosyid, 2017). Another implementation, the 30° head-up exercise, aims to facilitate and improve blood flow to the brain, maximize cerebral tissue oxygenation and motor skills, thus accelerating recovery in stroke patients, reduce intracranial pressure in hemorrhagic stroke patients, and provide comfort and relaxation for hemorrhagic stroke patients (Arif Hendra Kusama, et al., 2019). This 30° head-up exercise was

implemented throughout the patient's hospitalization.

EVALUATION

Evaluation is conducted using a formative approach (during the intervention) and summative (after all interventions have been completed). The intervention was completed (in accordance with nursing evaluation standards). The patient's blood pressure evaluation showed a significant decrease from 160/90 mmHg to 140/85 mmHg within 3 days of treatment. The patient reported a decrease in pain and dizziness complaints, with the patient reporting a reduction in headaches and dizziness after the nursing intervention. The initial pain was rated 4 on a scale, and after pain medication was administered, the pain decreased to 3. The patient's adherence to therapy improved, with the patient becoming more disciplined in taking his antihypertensive medication and adopting a healthy lifestyle as recommended. The patient's sleep patterns improved, with the patient reporting better quality sleep after receiving education on relaxation techniques and sleep hygiene. Initially, the patient slept only 1 hour, but after receiving education on relaxation techniques and sleep hygiene, the patient's sleep time increased by approximately 30 minutes, resulting in a 30-minute increase in sleep time. The patient's physical activity increased, with the patient becoming more physically active and incorporating light activities into their daily routine. Music therapy significantly reduced insomnia in the elderly. The researchers observed no side effects during this study. or dangers during music therapy. Music therapy provided a level of comfort and relaxation to the respondents, resulting in a decrease in sleep disturbances.

The risk of cerebral tissue perfusion after 30° head-up positioning, monitoring vital signs, and hypertension exercises reduced the patient's blood pressure from 160/90 mmHg to 140/85 mmHg. Pharmacological management identified the type and dosage of medication the patient was taking. Ensured the patient understood how to use the medication and its potential side effects. Observed the patient's response to drug therapy and evaluated its effectiveness. Thus, the nursing implementation successfully resulted in significant improvements in the patient's condition, both physiologically and psychosocially.

CONCLUSION

The implementation of nursing interventions for 3 days resulted in a decrease in blood pressure from 160/90 mmHg to 140/85 mmHg, improved sleep quality, and increased patient compliance with antihypertensive therapy. Thus, nursing care that focuses on blood pressure monitoring, therapy compliance, and a healthy lifestyle has been proven effective in improving the quality of life of elderly patients with hypertension.

REFERENCES

- Aspiani, R.Y. 2016. Buku Ajar Asuhan Keperawatan Klien Gangguan Kardiovaskular Aplikasi NIC & NOC. Jakarta: Buku Kedokteran EGC.
- Dwie kuniasih dan Yuni Astuti,. (2018). Terapi KomplementerGuna Menurunkan Nyeri pada pasien hipertensi.Di akses 31 desember 2022.
- Erika untari, D dan Niputu W, (2018) teknik relaksasi autogenik terhadap tekanan darah pada lansia dengan hipertensi. Di akses 31 desember 2022
- Kemenkes RI. 2019. Hari Hipertensi Dunia 2019:
- Nixson manurung 2018. Keperawatan medical bedah trans info media, Jakarta
- Nurarif, H. K. (2015). Aplikasi Asuhan Keperawatan Berdasarkan Diagnosa Medis dan Nanda Nic-NOC. (3, Ed.). Jogjakarta: Mediaction publishing

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- Nurarif & Hardhi. (2015). Aplikasi Asuhan Keperawatan Berdasarkan Diagnosa Medis & Nanda Nic-Noc Panduan penyusunan Asuhan Keperawatan Profesional. Yogyakarta : Mediacion Jogja.
- Rita, D 2016 Terapi Relaksasi Napas Dalam Menurunkan Tekanan Darah Pasien Hipertensi di Desa Kesesi Kecamatan Kesesi Kabupaten Pekalongan. Diakses
- PPNI. (2016). Standar Diagnosis Keperawatan Indonesia : Definisi dan Indikator Diagnostik (1st ed.). Jakarta: DPP PPNI.
- PPNI. (2018). Standar Intervensi Keperawatan Indonesia : Definisi dan Tindakan Keperawatan (1st ed.). Jakarta: DPP PPNI.
- PPNI. (2018). Standar Luaran Keperawatan Indonesia : Definisi dan Kriteria Hasil Keperawatan (1st ed.). Jakarta: DPP PPNI.
- Sufa, S. A., Christadntyawati, N., & Jusnita, R. A. E. (2017). Tren Gaya Hidup Sehat dan Saluran Komunikasi Pelaku Pola Makan Food Combining. diakses tanggal 31 desember 2022
- Sariman, P., Erni, Bustom., & Rejaya, S. A. (2022). Pengaruh terapi relaksasi autogenik terhadap perubahan tekanan darah pada lansia. Diakses pada tanggal 31 desember 2022
- Rahmawati, I., Dwiana, D., Effendi, & Reko. (2020). Hubungan Hipertensi Dengan Tingkat Kemandirian Lansia Di Balai Pelayanan Dan Penyantunan Lanjut Usia (Bpplu) Provinsi Bengkulu. Jurnal Ners Lentera, 8(1), 17–24.
- Safrudin, A. (2020). Klasifikasi Usia Berdasarkan Citra Wajah Menggunakan Local Binary Pattern Dan K-Nearest Neighbors. 1–6.
- Tim Pokja SDKI DPP PPNI. (2016). Standar Diagnosis Keperawatan Indonesia: Definisi Dan Indikator Diagnostik. Jakarta: Dewan Pengurus PPNI
- Afrina, R. (2017). Hubungan Dukungan Sosial Keluarga Dengan Manajemen Perawatan Diri Penderita Hipertensi Di Puskesmas Andalas Padang Tahun 2017. In Andalas University.
- Betan, A., Rukayah, S., Purbanova, R., Purwoto, A., Rusli, R., Nurnainah, N., & Prabu Aji, S. (2023). Manajemen Penerapan Asuhan Keperawatan Melalui Tingkat Kesembuhan Pasien Rawat Inap Di Rumah Sakit. Sahabat Sosial: Jurnal Pengabdian Masyarakat, 1(2). <https://doi.org/10.59585/sosisabdimas.v1i2.36>
- Cahyanti, L. (2017). Penatalaksanaan teknik relaksasi napas dalam pada pasien hipertensi untuk mengurangi nyeri di RSUD dr Loekmono Hadi Kudus. Jurnal Profesi Keperawatan, 4(2).
- Helga. (2020). Pentingnya Konsep Dasar Dalam Proses Keperawatan Dalam Memberikan Asuhan Keperawatan. In OSF Preprints.
- Ilmia, I., Dwi Setyaningsih, R., Teja Muti, R., Studi Keperawatan, P., & Sarjana Fakultas Kesehatan, P. (2021). Gambaran Tekanan Darah pada Lansia di Rojinhom Ryukryu Medicals Okinawa Jepang.
- Jannah, M. (2019). Aplikasi Teori Keperawatan dalam Memberikan Asuhan Keperawatan Di Rumah Sakit.
- Kusmarni, Y. (2017). STUDI KASUS (John W. Creswell) Oleh Yani Kusmarni.
- Lestari, L., Pahrul, D., Fatriansari, A., Desvitasari, H., Siti, S., & Palembang, K. (2023). Pengaruh Terapi Rendam Kaki Air Hangat Terhadap Perubahan Tekanan Darah Pada Penderita Hipertensi (Vol. 6, Issue Juni).

Mauritha, F. U. (2022). Modul Asuhan Keperawatan Pada Ny E dengan Penyakit Hipertensi Di Desa Talang Nangka Kecamatan Pemulutan Tahun 2022.