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NURSING CARE FOR MRS. W DIAGNOSED WITH HYPERTENSIVE URGENCY USING FOOT MASSAGE THERAPY IN THE EMERGENCY DEPARTMENT

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KEYWORDS

Nursing Care, Urgent Hypertension, Foot Massage Therapy.

ABSTRACT

Hypertensive emergency is a hypertensive crisis characterized by a sudden increase in blood pressure of 180/110 mmHg without organ damage. Hypertensive disease has increased every year due to low awareness of compliance in taking medication and maintaining a healthy lifestyle in hypertensive patients. The purpose of this case study is to provide nursing care to patients experiencing hypertension urgency. This research method uses a qualitative approach with case studies as the main method, using observation sheets, interviews, and documentation studies. This case study chose one patient as the research subject, namely a patient with hypertensive urgency in the emergency room of Gunung Jati Hospital, Cirebon City. Nursing care management is based on meeting the needs of patients carried out in 1 day. The results of the case study showed that after being given nursing care there was a decrease in blood pressure from 195/110 mmHg to 187/104 mmHg. The conclusion is that the nursing care provided is effective in emergency hypertension patients and meets the needs of patients. The implication of this study is the importance of nursing care in managing hypertension emergencies, which can help in the effective monitoring and management of this disease. In addition, this study also strengthens the understanding of the importance of patient compliance in managing hypertension to prevent complications that can arise.

INTRODUCTION

Hypertension is a non-communicable disease (NCD) because it does not show signs and symptoms. Systolic blood pressure measurement reaches more than 140 mmHg, and diastolic pressure reaches more than 90 mmHg (Nonasri, 2021).

Uncontrolled hypertension will become a hypertensive crisis, which is classified into emergency hypertension and urgent hypertension (Van Why & Pan, 2022). Urgent hypertension is an increase in blood pressure of more than 180/110 mmHg without organ damage. Urgent hypertension can occur without symptoms or with symptoms such as severe headache. Conditions like this are associated with stopping or reducing treatment (Pramana, 2020).

Based on World Health Organization Data (2019) proves that approximately 1.13 billion suffer from hypertension in the world, which means that one in three people suffer from hypertension in the world (Wati, 2021). The prevalence of hypertension in the world reaches

22% of the total world population. The Southeast Asian region is the 3rd highest in the world, with a hypertension prevalence of 25% of the total population. Hypertension rates will continue to increase every year; in 2025, it is predicted that the number of people with hypertension will reach 1.5 billion, and 10.44 million people will die each year due to hypertension and the complications experienced (Lestari et al., 2021).

Based on Basic Health Research, the prevalence of hypertension in the population aged > 18 years is 34.11% (Hidayat et al., 2021). Hypertension in the population aged 31-44 years is 31.6%, 45-54 years 45.3%, and 55-64 years 55.2%. Hypertensive disease increases every year because awareness of compliance in taking medication and maintaining a healthy lifestyle in hypertensive patients is still low, and also hypertension is a degenerative disease (N. W. Sari et al., 2020).

Hypertension begins with atherosclerosis (hardening of the arteries) (Stone, 2021). Atherosclerosis is characterized by the accumulation of fat in the arterial wall, which causes the volume of blood flow to the heart to decrease because the arterial muscle cells are deposited with fat, which then forms plaque, and arterial narrowing occurs so that it cannot regulate blood pressure and results in hypertension. Urgent hypertension that is not treated quickly and appropriately will damage the blood vessels and develop into emergent hypertension characterized by damage to organs such as the brain, heart and kidneys (Alodokter, 2020).

The high incidence of hypertension is a concern because it has various complications. Hypertension management can anticipate and prevent these complications, which can be done pharmacologically and non-pharmacologically. Pharmacological management is done by administering antihypertensive drugs. In contrast, non-pharmacological management combines complementary therapies, including acupuncture, acupressure, cupping, and massage/massage (Hurrah, 2019).

Alternative non-pharmacological therapy that is very effective in reducing and helping treat hypertension is foot massage therapy. Research conducted by (Fandizal et al., 2020) proved that after reflexology therapy was carried out for 30 minutes within six days, it was able to decrease by an average of 8.7 mmHg every day and made the body lighter, reduced headaches and was able to reduce blood pressure in hypertensive respondents who were not controlled, and not on drug therapy. Also, foot reflexology therapy has a significant effect on reducing systolic and diastolic blood pressure in hypertensive respondents who are not due to pervert disease.

Based on these data and information, conducting a case study by providing nursing care to urgent hypertension patients in meeting patient needs is essential. To the background that has been stated, the objectives of this study include being able to explain the basic concepts of nursing care to Mrs W with a medical diagnosis of urgent hypertension using foot massage therapy in the Emergency Room. The benefit of this study is to increase understanding of the basic concepts of nursing care in patients with hypertension urgency, especially in the context of applying foot massage therapy. This can contribute to developing a holistic and effective method of managing hypertension urgency and broaden insights related to non-pharmacological interventions in nursing practice. In addition, this study can also guide health practitioners in providing more personalized and therapeutic care according to patients' individual needs patients needs.

RESEARCH METHOD

This study used a qualitative approach with a case study as the primary method. The study subject used was one patient who experienced urgent hypertension with blood pressure more than 180/110 mmHg and who still received nursing care according to standard practice guidelines. This case was taken in the emergency room of Gunung Jati Hospital, Cirebon City, on March 07, 2024. Data collection conducted by researchers managing this case study includes interviews, observations, and documentation studies. Data analysis was carried out from the time the researcher was in the research field of data collection until the data was collected. Then, the researcher compiled a nursing care plan and implemented and evaluated the nursing care given to the patient.

RESULT AND DISCUSSION

Pre-arrival assessment in this case is a patient named Mrs. W, aged 57 years, who entered the emergency room on March 06, 2024, with a medical diagnosis of hypertension urgency. On March 07, 2024, the patient complained of shortness of breath since one day ago, had been unconscious since four days ago, had not urinated since five days ago, had a history of uncontrolled hypertension, and had a history of diabetes mellitus since six months ago.

A quick and immediate assessment on March 07, 2024, was obtained. Airway: The airway is clean, and there is no obstruction. Airwayhe airway. Breathing: respiratory rate: 28x/min, SpO2 99%, NRM 10 litres. Circulation: blood pressure (BP): 195/110 mmHg, MAP: 138 mmHg, Heart rate (HR): 118 x/min, Glasgow Coma Scale: eye 3, motor 4, verbal 2, 9 (Somnolent), CRT <3 Seconds. NGT and DC were installed. The patient received several medications: Cefoferazone 1x1gr, Citicolin 1x1000ml, and Novorapid 6 units. Electrocardiogram (ECG): sinus tachycardia, with a heart rate of 118x/min. Laboratory results were obtained: Hemoglobin: 13.7 g/dL, hematocrit: 39.5%, erythrocytes 4.66/uL, leukocytes 146,700/uL, lymphocytes 17.5%, monocytes 4.6%, sodium 125.7 mmol/L, and chloride 95.6 mmol/L. GDS 378mg/dl.

A comprehensive assessment was obtained on March 7, 2024, and the patient still looks short of breath, accompanied by decreased consciousness. The patient's respiratory status can be seen as irregular breathing patterns with the appearance of dyspnea. Circulatory status: irregular pulse, blood pressure 195/110 mmHg, MAP: 138 mmHg, oxygen saturation 99%, heart rhythm: sinus tachycardia HR: 118x/min. Neurosensory status obtained somnolent consciousness with patient GCS 9, patient body temperature 37.0oC. Gastrointestinal status: There is no fluid restriction, and the mouth looks dry; elimination status: urine appearance looks brownish yellow with a total of 500 cc; the patient is attached to a size 16 catheter: integument and Braden scale intact skin, normal skin colour, no rash or redness.

Nursing diagnoses based on the patient's condition are ineffective breathing patterns associated with resistance to breathing efforts, risk of decreased cardiac output associated with changes in afterload, and risk of cerebral perfusion associated with hypertension.

Based on the nursing action plan that has been made and compiled to overcome the first problem, namely ineffective breathing patterns for Mrs W, the actions taken are according to plan. Nursing implementation to overcome the problem of ineffective breathing patterns in Mrs

W is monitoring frequency, rhythm, and breath effort, monitoring ineffective breathing patterns, monitoring oxygen saturation, and adjusting respiration monitoring intervals according to patient conditions. Based on the nursing action plan that has been created and compiled to address the problem of decreased cardiac output risk in Mrs. W, the actions taken are according to plan. Nursing implementation was carried out to address the risk of decreased cardiac output in Mrs W by the intervention, namely identifying the causes of signs/symptoms of decreased cardiac output, monitoring blood pressure, and monitoring ECG 12 leads. Based on the nursing action plan created and compiled to address the risk of ineffective cerebral perfusion in Mrs. W, the actions taken are according to plan. Nursing implementation was carried out to overcome the risk of ineffective cerebral perfusion problems in Mrs W by identifying the causes of increased ICP, monitoring signs/symptoms of increased ICP, and collaborating on drug administration.

The evaluation found after treatment for 1x7 hours on Mrs. W that the problem of ineffective breathing patterns associated with obstacles to breathing efforts was partially resolved by the planning criteria, the frequency of breathing improved, the patient's breathing decreased to 24 x/minute, and the intervention was continued. The evaluation found after treatment for 1x7 hours on Mrs W, the problem of decreased cardiac output risk associated with increased afterload is partially resolved; the results obtained that after foot massage therapy, the patient's blood pressure decreased to 187/104 mmHg, and the intervention continued. The evaluation found after treatment for 1x7 hours on Mrs. W, the risk problem of ineffective cerebral perfusion associated with hypertension was partially resolved. The results obtained a blood pressure of 190/100, but the patient still seemed unconscious, and the intervention was continued.

Ineffective Breathing Pattern

In this case, the patient's complaint was shortness of breath. This is by the opinion (Udjianti, 2020), which states that there are complaints of shortness of breath in hypertensive patients. This theory is reinforced by the opinion (Sudoyo et al., 2021) that the signs and symptoms of hypertensive patients are weakness/fatigue, shortness of breath and an increase in blood pressure. In Mrs W, the enforcement of nursing diagnoses, according to (Indonesia, 2016), namely ineffective breathing patterns associated with obstacles to breathing efforts characterized by shortness of breath. Based on (Indonesia, 2016), there are significant symptoms and signs, such as subjective dyspnea, and objective data, such as the use of respiratory aids and abnormal breathing patterns. Minor symptoms and symptoms are subjective: orthopnea and objective data are pursed lip and nasal lobe breathing.

Complaints of shortness of breath indicate the enforcement of nursing diagnoses. According to (Indonesia, 2016), symptoms and signs support the enforcement of nursing diagnoses, namely ineffective breathing patterns. According to (Nurarif & Kusuma, 2015), hypertension causes the heart to work harder to pump blood throughout the body. Excessive heart work, over time, can lead to several other health problems, such as cardiovascular disease, which can cause symptoms of shortness of breath.

Based on the planning, Mrs W, the actions to be taken care of the interventions that researchers have compiled to the problem of ineffective breathing patterns SLKI SIKI (2017). Interventions were carried out on Mrs W with the aim that after taking nursing action for 1 x 7

hours, it is hoped that breathing patterns will improve with the outcome criteria: Dyspnea decreases, breathing frequency improves. The action plan for monitoring respiration includes observation: monitor frequency, rhythm, and breath effort; monitor breathing patterns; monitor oxygen saturation; therapeutic: set respiration monitoring intervals according to patient conditions; document monitoring results; education: inform monitoring results; collaboration: administer oxygen.

One of the measures that can be implemented is for patients using NRM to receive oxygen therapy properly. This oxygen therapy aims to develop the work of the heart and maintain oxygen in the body properly. Oxygen administration can reduce dyspnea if done according to needs (Ahmad Muzaki, 2020).

Risk of Decreased Cardiac Output

Based on the results of the assessment of Mrs W during the examination, the blood pressure was 195/110 mmHg, pulse 110 x/min, body temperature 36.5oC, breathing 26 x/min, and the patient was installed NRM 10 pm. This is due to the characteristic limitations (Wilkinson & Ahern, 2016), which state that patients with decreased cardiac output are characterized by tachycardia and ECG changes. In addition, it is reinforced by the opinion (Nurarif & Kusuma, 2015) that hypertensive patients experience fatigue, weakness, and tightness. Based on this theory, the author did not find a gap between the assessment results and reality. Mrs W was categorized as having decreased cardiac output.

In Mrs W, the nursing diagnosis, according to (Indonesia, 2016), is a decrease in cardiac output associated with changes in afterload. Based on (Indonesia, 2016), there are significant symptoms and signs, such as subjective dyspnea, and objective data, such as increased/decreased blood pressure and weak palpable peripheral pulse. While the symptoms are minor, subjective, unavailable, and objective data, the cardiac index decreased, the left ventricular stroke work index decreased, and the stroke volume index decreased.

Increased blood pressure indicates the enforcement of nursing diagnoses. According to (Indonesia, 2016), symptoms and signs support the enforcement of nursing diagnoses, namely decreased cardiac output. According to (Ev. E. P. Sari & Aderita, 2018), hypertension causes the aorta and large arteries to reduce their ability to accommodate the volume of blood pumped by the heart, resulting in decreased cardiac output.

Based on the planning of Mrs W, the actions to be taken are the interventions that the researchers have compiled with the problem of decreasing cardiac output SLKI SIKI (2017). Interventions were carried out on Mrs W with the aim that after taking nursing action for 1 x 7 hours, it is hoped that cardiac output will increase with the outcome criteria: Tachycardia decreases, and blood pressure improves. The action plan in cardiac care includes observation: identify signs/symptoms of decreased cardiac output, monitor blood pressure, monitor ECG 12 leads, therapeutic: position the patient semi-fowler or Fowler, provide foot massage therapy, collaboration: collaboration in giving antiarrhythmics.

One of the non-pharmacological treatments that can be done in patients suffering from hypertension is foot massage therapy. The response of foot massage therapy is to have a relaxing effect due to the stimulation of the saraf tepi to the central and rear nervous systems, which causes a decrease in sympathetic nervous system pressure and blood pressure. (Rahayu & Hanifah, 2023)

Risk of Ineffective Cerebral Perfusion

The patient's general condition was severe, with a somnolent level of consciousness (E3M4V2). On examination of vital signs, the patient's blood pressure was 195/100 mmHg, pulse 110 x/min, body temperature 36.5oC, and respiration 26 x/min. (Aspiani, 2014) explains that patients with hypertension usually experience cerebral perfusion problems. The risk of ineffective cerebral perfusion is a decrease in oxygen levels due to failure to maintain tissue at the capillary level. (Rahmawati, 2022). Based on this theory, the author does not find a gap between the assessment results and reality. Mrs W is categorized as experiencing the risk of ineffective cerebral perfusion.

In Mrs W, the enforcement of nursing diagnoses, according to the (Indonesia, 2016), is the risk of ineffective cerebral perfusion associated with hypertension characterized by the patient appearing unconscious. Based on (Indonesia, 2016), some significant symptoms and signs are not available. At the same time, minor symptoms and symptoms are not available-risk Factors: Hyperglycemia, sedentary lifestyle, hypertension, smoking, trauma.

Decreased awareness shows for the enforcement of nursing diagnoses. According to (Indonesia, 2016), symptoms and signs support the enforcement of nursing diagnoses, namely the risk of ineffective cerebral perfusion. The risk of ineffective cerebral perfusion is a decrease in oxygen levels due to failure to maintain tissue at the capillary level. (Rahmawati, 2022). Rupture of cerebral blood vessels will cause bleeding, and it will be fatal if there is an interruption of blood flow to the distal part. Besides that, extravasate blood will be deposited, which will cause increased intracranial pressure, while the narrowing of cerebral blood vessels will disrupt blood flow to the brain and brain cells will experience death (Widiyani et al., 2020). (Widiyani et al., 2021).

Based on the planning of Mrs W, the actions to be taken are the interventions that the researchers have compiled with the risk problem of ineffective cerebral perfusion SLKI SIKI (2017). Interventions were carried out on Mrs W with the aim that after taking nursing action for 1 x 7 hours, it is hoped that cerebral perfusion will improve with the outcome criteria: The level of consciousness increases, and blood pressure improves. The action plan for managing increased ICP includes observation, identifying the causes of increased ICP, monitoring signs/symptoms of increased ICP, therapeutic: minimizing stimulus with a calm environment, and collaboration: providing sedation and anticonvulsants.

The pharmacological therapy given is citicolin 1 x 1000 ml, giving citicolin as a neuroprotectant can repair cell membranes by increasing the synthesis of phosphatidylcholine, which is the main component of cell membranes, especially the brain. Using citicolin can reduce vasogenic cerebral oedema and restore the integrity of the blood-brain barrier (Afifah et al., 2024).

CONCLUSION

Based on the results of research conducted on patients with nursing problems in the form of ineffective breathing patterns, risk of decreased cardiac output, and risk of ineffective cerebral perfusion, it was found that the implementation of nursing actions by established diagnoses, planned nursing interventions, and data analysis with the needs of urgent hypertension patients could result in improved patient conditions. Evaluation of the nursing care provided shows that some of the three nursing diagnoses have been resolved according to

plan. At the same time, other interventions can be continued in the HCU Room. Further research suggests conducting follow-up monitoring of patients to ensure the sustainability of condition improvement and expanding research on the effectiveness of nursing interventions in patients with similar nursing problems. The implication of this study is the importance of implementing directed and planned nursing actions in improving the quality of nursing care and reducing the risk of complications in patients with complex medical conditions such as hypertension urgency.

REFERENCES

Afifah, N. R., Darliana, D., & Bahri, T. S. (2024). Asuhan Keperawatan pada Pasien dengan Stroke Iskemik: Studi Kasus. *Jurnal Penelitian Perawat Profesional*, *6*(4), 1627–1638.

Ahmad Muzaki, Y. A. (2020). Penerapan posisi semi fowler terhadap ketidakefektifan pola nafas pada pasien congestive heart failure (CHF). *Nursing Science Journal (NSJ)*, *1*(1), 19–24.

Alodokter. (2020). *Jangan Anggap Sepele Gangguan Pada Sistem Peredaran Darah*. Www.Alodokter.Com. https://www.alodokter.com/jangan-anggap-sepele-gangguan-pada-sistem-peredaran-darah

Aspiani, R. Y. (2014). Buku Ajar Asuhan Keperawatan Klien Gangguan Kardiovaskular Aplikasi NIC & NOC. *Jakarta: EGC*.

Fandizal, M., Astuti, Y., & Sani, D. N. (2020). Implementasi Pijat Refleksi Kaki Terhadap Penurunan Tekanan Darah Pada Klien Dengan Hipertensi Tidak Terkontrol: Implementation Of Foot Reflexology Massage To Decrease Blood Pressure In Clients With Uncontrolled Hypertension. *Jurnal Ilmiah Pamenang*, *2*(1), 17–21.

Hidayat, R., Agnesia, Y., & Safitri, Y. (2021). Faktor Risiko Hipertensi Pada Masyarakat Di Desa Pulau Jambu Uptd Blud Kecamatan Kuok Kabupaten Kampar. *Jurnal Ners*, *5*(1), 8–19.

Huriah, T. (2019). Metode Massage Terhadap Tekanan Darah Pada Penderita Hipertensi: A Literatur Review. *Jurnal Penelitian Keperawatan*, *5*(1).

Indonesia, P. P. N. (2016). Standar diagnosis keperawatan Indonesia. *Jakarta: Ppni*.

Lestari, S. A., Siregar, A., Telisa, I., & Hartati, Y. (2021). Pengaruh Pemberian Smoothies Pisang Dan Melon Terhadap Tekanan Darah Pada Lansia Penderita Hipertensi Di Puskesmas Sukarami Kota Palembang. *JGK: Jurnal Gizi Dan Kesehatan*, *1*(2), 52–61.

Nonasri, F. G. (2021). Perilaku mencari pengobatan (health seeking behavior) pada penderita hipertensi. *Jurnal Medika Hutama*, *2*(02 Januari), 680–685.

Nurarif, A. H., & Kusuma, H. (2015). Aplikasi asuhan keperawatan berdasarkan diagnosa medis & Nanda NIC-NOC. *Yogyakarta: Mediaction*.

Pramana, D. (2020). Penatalaksanaan krisis hipertensi. *Jurnal Kedokteran*, *5*(2), 91–96.

Rahayu, C. E., & Hanifah, F. (2023). Pengaruh Terapi Pijat Refleksi Kaki Terhadap Penurunan Tekanan Darah Pada Pasien Hipertensi. *NURSING UPDATE: Jurnal Ilmiah Ilmu Keperawatan P-ISSN: 2085-5931 e-ISSN: 2623-2871*, *14*(1), 212–221.

Rahmawati, Y. (2022). *Asuhan Keperawatan Dengan Masalah Risiko Perfusi Serebral Tidak Efektif Pada Pasien Cerebrovascular Accident (CVA) Di RSUD Prof Dr. Soekandar Mojosari*. Perpustakaan Universitas Bina Sehat.

Sari, Ev. E. P., & Aderita, N. I. (2018). Penatalaksanaan Terapi Musik Klasik dengan Masalah Keperawatan Gangguan Penurunan Curah Jantung pada Pasien Hipertensi di RSUD Dr. Soediran Mangun Sumarso Wonogiri. *Indonesian Journal on Medical Science*, *5*(1).

Sari, N. W., Margiyati, M., & Rahmanti, A. (2020). Efektifitas metode self-help group (SHG) terhadap tekanan darah pada lansia hipertensi. *Jurnal Keperawatan*, *3*(03), 10–16.

Stone, P. H. (2021). Systemic Arterial Hypertension: Innovative Methods to Elucidate

Mechanisms of Atherosclerosis and Arterial Restructuring∗. *Journal of the American College of Cardiology*, *77*(5), 590–592. https://doi.org/https://doi.org/10.1016/j.jacc.2020.12.007

Sudoyo, A. W., Setiyohadi, B., Alwi, I., Simadibrata, M., & Setiati, S. (2021). Buku ajar ilmu penyakit dalam. *Jakarta: Fkui*, 400–411.

Udjianti, W. J. (2020). Keperawatan kardiovaskular. *Jakarta: Salemba Medika*, *2*.

Van Why, S. K., & Pan, C. G. (2022). Primary Causes of Hypertensive Crisis. *Critical Care Clinics*, *38*(2), 375–391. https://doi.org/https://doi.org/10.1016/j.ccc.2021.11.016

Wati, F. R. (2021). *Hubungan Kepatuhan Konsumsi Obat Anti-Hipertensi Dengan Kualitas Hidup Pada Pasien Hipertensi Dengan Penyakit Penyerta Diabetes Mellitus Di Puskesmas Dinoyo Malang Fifi Ratna Wati 1709.14201. 562*.

Widiyani, E., Muti, R. T., & Siwi, A. S. (2021). Asuhan Keperawatan Risiko Perfusi Jaringan Serebral Tidak Efektif pada Ny. S dengan Hipertensi di Desa Pengalusan Purbalingga. *Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 992–998.

Wilkinson, J. M., & Ahern, N. R. (2016). Diagnosis Keperawatan. *EGC. Jakarta*.