

COMBINATION OF GINGER AND HONEY THERAPY TO REDUCE BLOOD PRESSURE IN HYPERTENSION AND SEVERE HEADACHE PATIENTS: CASE STUDY IN SUNGAI KITANO VILLAGE, EAST MARTAPURA

Hery Wibowo, Nuarita Dewi Lestari

Nursing Study Program, Faculty of Medicine, Lambung Mangkurat University Jl. A. Yani Km. 36, Banjarbaru, 70714

*Email korespondensi : hery.wibowo@ulm.ac.id

Abstract

Background: Hypertension is a non-communicable disease that is quite common and can lead to severe conditions such as stroke, kidney failure, and heart disease. The negative impacts of hypertension can be prevented by implementing a healthy diet, regular exercise, and avoiding smoking. Headaches often appear when blood pressure rises, usually exceeding 140/90 mmHg. If this condition is not treated correctly, headaches interfere with daily activities. **Objective:** How does the combination of ginger and honey therapy reduce blood pressure in hypertensive patients? **Method:** This research applies the case study method through data collection by examining nursing Gordon patterns, observation, interviews, and physical examination. **Results:** There was a decrease in blood pressure from 179/130 mmHg to 123/82 mmHg after six days of administering a combination of ginger and honey decoction therapy. Ginger contains Gingerol, an antioxidant and anticoagulant, helping lower blood pressure. Meanwhile, honey contains nitrogen oxide, phenolic compounds, and flavonoids, which protect capillary health and atherosclerosis. **Conclusion:** there was a reduction in blood pressure for 6 days with ginger and honey decoction therapy

Keywords: hypertension, headaches, combination of ginger and honey therapy, case studies

Introduction

Hypertension is a non-communicable disease that can cause serious complications such as stroke and kidney failure (13,61). However, the negative impacts can be prevented by eating a healthy diet, exercising regularly, and not smoking. Causes of hypertension include genetic and environmental factors, such as migration to urban areas, changes in diet, aging, obesity, and lack of physical activity (52). People with hypertension often experience headaches, which can be caused by blood vessel problems (32). If not treated, this pain can interfere with daily activities (23). Secondary hypertension occurs due to medical conditions or medications, with an incidence rate of approximately 5% (12).

Based on data from the World Health Organization (WHO) in 2021, hypertension is 37% in developed countries and 29.9% in developing countries. The prevalence is higher in women, namely 37%, compared to men, who reach 28% (50). Hypertension is more common in low to middle-income countries. Africa has the highest prevalence at 27%, America has the lowest at 18%, while Southeast Asia is in third place at 25% (45). In Indonesia, the incidence of hypertension in 2021 reached 29.5% with 598,983 people, and South Kalimantan had the most cases, 34.1% (34).

Data from the East Martapura Community Health Center shows 736 new cases of

hypertension in 2021, increasing to 2,060 cases in 2022 and 884 cases in early 2023, most of which were suffered by women. In 2024, there will be 55 people with a history of hypertension. According to the JNC (Joint National Committee), 10 people experience hypertension based on blood pressure measurements (8).

High blood pressure is a problem with the blood vessels, characterized by an increase in blood pressure $\geq 140/90$ mmHg. Normal blood pressure for systolic is 120 mmHg and diastolic 80 mmHg. A person is considered hypertensive if their systolic blood pressure is more than 140 mmHg or diastolic more than 90 mmHg (54). This condition can cause serious problems requiring prompt medical attention (29,51). There are two ways to lower blood pressure: pharmacological and non-pharmacological. Non-pharmacological therapy, such as a decoction of ginger and honey, can be used. Ginger contains Gingerol, which can close calcium channels in blood vessel cells (44). The calcium in ginger also helps slow down renin Angiotensin and increases the excretion of water and sodium, thereby lowering blood pressure (38). Honey contains essential substances that influence antioxidant activity and protect capillaries. Combining these two therapies can more effectively reduce blood pressure by regulating heart rate and improving blood circulation (48,42,31).

Based on the description above, the researcher gave a decoction of ginger and honey to Mrs. Z to overcome hypertension problems and solve nursing diagnosis problems for Mrs. Z.

Method

This research is a case study research. It begins with data collection with a Gordon pattern nursing assessment, observation, interviews, and physical examination of Mrs. Z. The next step is to enforce diagnosis, intervention, implementation, and evaluation of nursing. Preparation of nursing plans based on the North American Nursing Diagnosis Association (NANDA) for 2021 – 2023.

The research was carried out for 6 consecutive days, starting from 23 – 28 November 2024, in Kitano River Village, East Martapura. Kitano Village is one of the wetland areas with 4 villages: Pagar Village, Ramasan Village, Kitano River Village, and Sungai Tangkas Village. This village is located around the Martapura River.

The primary intervention is ginger and honey decoction therapy to reduce blood pressure and headaches. The therapeutic procedure for giving ginger and honey is to wash 4 grams of ginger, peel it, cut it into small pieces, and boil it using a saucepan and 200 cc of water for ± 15 minutes. Then filter 100 cc and let stand at 37°C . After leaving it at 37°C , pour it into a glass and add 30 ml (2 tablespoons) of honey. Therapeutic administration of a decoction of ginger and honey is consumed once a day every morning for 6 consecutive days. If you are taking antihypertensive medication, you should take ± 8 hours after drinking the ginger and honey decoction.

Results And Discussion

Data Analysis

A study of Mrs. Z with hypertension and headaches in Kitano Martapura Timur Village was held on Friday, November 22, 2024, at 13.00 WITA. The assessment data obtained is the client's identity: Mrs. Z is 48. Mrs. Z looked good and healthy with a compliments level of consciousness, the vital signs obtained were blood pressure: 179/130 mmHg, RR: 22x/minute, N: 65x/minute, T: 36.5°C , SpO₂: 100%, GDS: 78.

During the assessment, the client stated that he had known that he had hypertension for the past six years. He has a family history of hypertension from his mother's side. The client and her husband maintain their diet and lifestyle, rarely consuming foods that contain a lot of salt, fat, and fast food, although they often drink tea. Clients consume vegetables and fruit daily and regularly undergo health checks at the East Martapura Health Center every month. He takes hypertension medication irregularly, feels dizzy occasionally, and rarely exercises. The client wants to learn more about hypertension and methods of controlling blood pressure.

The client's general condition looks good, with a composite level of consciousness (GCS E4 V5 M6). The client's skin is clean and moist, without lesions, bruising, or swelling. Skin turgor returns in less than 2 seconds and feels warm. The client's hair is short and clean, the majority black and dry, while the nails are short and clean. Moist lips, missing teeth, and clean

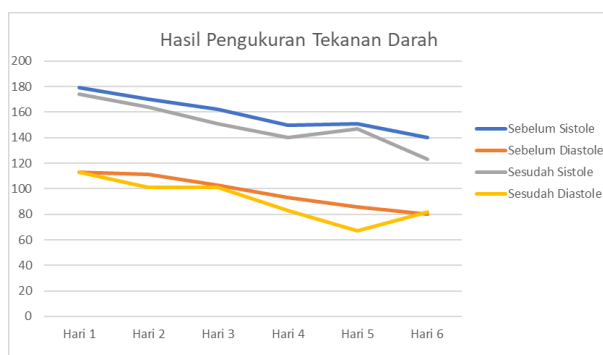
mouth. The neck showed no lumps or lesions. There is no obstruction of the jugular vein and no pain when swallowing. The abdomen is symmetrical, not distended, with bowel sounds 10 times per minute. Extremities were normal without deformity. The client can still walk every day and has good muscle strength. Vision and hearing function is normal, and smell is also good.

Diagnostic Analysis

Based on the results of the study, several data were obtained that refer to the nursing diagnosis, namely Readiness to Improve Health Management (00162), with the outcome that the client can control the signs and symptoms as well as the causal factors and strategies for hypertension after being given 6 x 24-hour intervention, it is hoped that the blood pressure will be within normal limits, action reducing symptoms of hypertension and information on the content of ginger and honey to reduce hypertension in a short, clear and easy to understand manner. Meanwhile, the diagnosis of acute pain (00132) with the outcome of the client being able to recognize headaches after being given 6x24-hour intervention is expected to reduce headaches with non-pharmacological treatment, namely ginger and honey decoction.

Implementation and Evaluation Analysis

Table 1. Blood Pressure Measurement Results



Based on the results of blood pressure measurements for 6 days with the therapeutic intervention of giving ginger and honey decoction, there was a periodic decrease from the first day to the sixth day with blood pressure from 174/113 mmHg to 123/82 mmHg. You can lower blood pressure by consuming a decoction of ginger and honey. Ginger contains Gingerol, which closes calcium channels, causes vasoconstriction, and lowers blood pressure. Meanwhile, honey contains

acetylcholine, which improves blood circulation and has an antioxidant effect. This is in line with research by Heriyanto (2022), which states that boiled ginger and honey water therapy can lower the blood pressure of hypertensive clients. This combination therapy regulates blood pressure and heart rate and contains acetylcholine, which lowers blood pressure (31).

Research by Amanda, D. and Santi, M. (2018) shows that hypertension is more common in people over 40 years due to loss of elasticity and thickening of blood vessel walls. Obesity also triggers hypertension. (3.60). Most hypertension shows no initial symptoms but can lead to fatal strokes and heart attacks (58). Mrs.'s blood pressure Z was recorded at 179/113 mmHg; he thought the cause was heredity and diet. Mrs. Z routinely checks his health and takes medication given by health workers.

Based on the results of the developmental evaluation, on the first day of intervention, blood pressure before drinking the ginger and honey decoction was 179/113 mmHg, and afterward 174/113 mmHg. On the sixth day, blood pressure fell from 140/80 mmHg to 123/82 mmHg. On the fifth day, blood pressure before drinking ginger and honey was 151/86 mmHg and 147/67 mmHg afterward. The consumption of salty foods and coconut milk influences this. According to research by Febrianingrum (2023), diet greatly influences the risk of hypertension. Someone with a poor diet, such as high in salt and low in fruit and vegetables, is more susceptible to hypertension (30). Hypertension can be prevented by changing your lifestyle, including a healthy diet and regular physical activity (16). Exercise can also reduce the risk of coronary heart disease and hypertension (35).

Table 2. Headache Measurement Results



Based on the developmental evaluation, Mrs. Z felt dizzy, which interfered with his activities, with pain on a scale of 7 (severe) on the first day. On the second day, Mrs. Z still feels dizzy (migraine) with a headache scale of 3 (mild). From the third day to the sixth day, Mrs. Z said there were no complaints of headaches. After consuming boiled ginger and honey water, Mrs. Z felt a decrease in tension in the nape of his neck and could carry out activities more comfortably. This decrease is influenced by the content of honey, which stimulates insulin secretion (46).

Conclusion

Based on the results of the intervention of giving ginger and honey decoction to Mrs. Z, who has hypertension, she found several things. Mrs. Z, 48 years old, lives in Kitano Martapura East Village, complaining of headaches and high blood pressure that won't go down. His initial blood pressure was 179/130 mmHg, influenced by hereditary factors and diet. The primary nursing issue is readiness to improve health management, with interventions to monitor vital signs and teaching about pain management. The ginger and honey decoction was given for 6 days. During the intervention, Mrs. Z decreased from 179/113 mmHg to 123/82 mmHg, and initially, 7 (severe) headaches dropped to 0 (no headache).

Suggestion

It is hoped that patients will develop the habit of consuming ginger and honey to reduce unhealthy living behavior and prevent complications of hypertension and headaches. Patients must also avoid foods high in saturated fat and salt and increase regular physical activity to control hypertension risk factors. By designing this intervention, combining ginger and honey decoction therapy as a supporting treatment in the community, especially in wetland areas, will increase information about its benefits in non-pharmacological therapy for hypertension in Kitano Martapura Timur Village.

Thanks To

The researcher would like to express his deepest gratitude to the supervisor, Hery Wibowo, S. Kep. , Ns. , M. Kep. , who kindly provided valuable suggestions and guidance in completing

this scientific paper. Thanks were also conveyed to the examining lecturer, Rizka Hayyu Nafi'ah, S. Kep. , Ns. M. Kep. , who provided constructive criticism and suggestions so that this paper could be better. The researcher also thanks Mrs. Z, who has received nursing care throughout this research until its completion.

Reference

1. Aini R. Pengaruh pemberian madu terhadap perubahan tekanan darah pada penderita hipertensi di wilayah kerja upk puskesmas khatulistiwa kecamatan pontianak utara. *J Keperawatan*. 2018;24:1–12.
2. Alley MA, Schick M. *Hyperion Emergency*. 2023.
3. Amanda D, Martini S. Hubungan karakteristik dan status obesitas sentral dengan kejadian hipertensi. *J Berkala Epidemiol*. 2018;6(1):57–66.
4. Ahn YM, Kim HY, Kang DG, Cho KW, Lee HS. Herbal medicine (Oryeongsan) is used for fluid and sodium balance in the renal cortex of spontaneously hypertensive rats. *Integr Med Res*. 2024. <https://doi.org/10.1016/j.imr.2023.101007>
5. Ahuja N, Bhardwaj P, Pathania M, Sethi D, Kumar A, Parchani A, et al. *Journal of Ayurveda and Integrative Medicine*. 2024. <https://doi.org/10.1016/j.jaim.2023.100882>
6. Arawwawala M, Hewageegana S. Health benefits and traditional uses of honey: A review. *J Apitherapy*. 2017;2(1):9. <https://doi.org/10.5455/ja.2017020804372>
7. Aisara S, Azmi S, Yanni M. Gambaran klinis penderita penyakit ginjal kronik yang menjalani hemodialisis di RSUP Dr. M. Djamil Padang. *J Kesehatan Andalas*. 2018;7(1):42. <https://doi.org/10.25077/Jka.V7i1.778>
8. Amalia N, Norhayati N, Rakhmatullah AN, Puspawati P. Pemanfaatan jus bawang putih tunggal (*Allium sativum*) terhadap pencegahan kolesterol, glukosa, dan hipertensi di Desa Sungai Rangas Kecamatan Martapura Barat. *J Kreativitas PKM*. 2024;7(5):2194–2208.
9. Azizah W, Uswatun H, Asri TP. Penerapan slow deep breathing terhadap tekanan darah pada pasien hipertensi. *J Cendikia Muda*. 2022; ISSN: 2807-3469.
10. Amanda D, Martini S. Hubungan karakteristik dan obesitas sentral dengan kejadian hipertensi. *J Berkala Epidemiol*. 2018;6(1):43–50.
11. Baena A, Paolino M, Villarreal-Garza C, Torres G, Delgado L, Ruiz R, et al. *Latin America and the Caribbean Code Against Cancer 1st Edition: Medical interventions including hormone replacement therapy and cancer screening*. *J*

- Cancer Epidemiol. 2023. <https://doi.org/10.1016/j.canep.2023.102446>
12. Cluett JL, William JH. Evaluation and management of resistant hypertension: Core curriculum 2024. *J AJKD Core Curr Nephrol.* 2024. <https://doi.org/10.1053/j.ajkd.2024.04.009>
13. Conte L, Lupo R, Lezzi A, Paolo V, Rubbi I, Rizzo E, et al. A nationwide cross-sectional study investigating adherence to the Mediterranean diet, smoking, alcohol, work habits, and hormonal dynamics between breast cancer cases and healthy subjects. *Clin Nutr Open Sci.* 2024. <https://doi.org/10.1016/j.nutos.2024.02.007>
14. Dinas Kesehatan Kabupaten Banjar. Profil Kesehatan Kabupaten Banjar Tahun 2017. Banjar: Dinas Kesehatan; 2017.
15. Dinas Kesehatan. Profil Kesehatan Kabupaten Banjar 2021. Banjar: Dinas Kesehatan; 2021.
16. Hapsari DI, Yufiana E. Perilaku pencegahan hipertensi pada usia produktif dalam Germas di Puskesmas Manggala Kecamatan Pinoh Selatan. *SEHATMAS J Ilm Kesehatan Masyarakat.* 2023;2(3):720–727. <https://doi.org/10.55123/sehatmas.v2i3.2209>
17. Deksisia H, Adeba G, Teferi T. Does cluster beekeeping improve the efficiency of honey production in participant households in southwestern Ethiopia? *Heliyon.* 2024. <https://doi.org/10.1016/j.heliyon.2024.e38651>
18. Doneddu PE, Iorfida A, Alberti C, Nobile-Orazio E, Fabbri A, Voza A, et al. Neuropathic pain in the emergency setting: Diagnosis and management. *J Clin Med.* 2023. <https://doi.org/10.3390/jcm12186028>
19. Devi TER, et al. Hubungan index massa tubuh dengan tekanan darah pra-lansia. *J Ilm Kesehatan Rustida.* 2021;8(2):111–119.
20. Dinas Kesehatan Kabupaten Banjar. Profil Kesehatan Kabupaten Banjar Tahun 2017. Banjar: Dinas Kesehatan; 2017.
21. Effendi R, Salsabila H, Malik A. Pemahaman tentang lingkungan berkelanjutan. *Modul.* 2018;18(2):75.
22. Alva Nadia E. Efek pemberian jahe terhadap tekanan darah pada pasien hipertensi. *J Med Utama.* 2020;02(01):343–348.
23. Ferdisa RJ, Ernawati E. Penurunan nyeri kepala pada pasien hipertensi menggunakan terapi relaksasi otot progresif. *News Muda.* 2021;2(2):e-ISSN: 2723-8067. <https://doi.org/10.26714/nm.v2i2.6281>
24. Frondelius L, Lindeberg H, Pastell M. Lameness changes the behavior of dairy cows: daily rank order of lying and feeding behavior decreases with increasing number of lameness indicators present in cow locomotion. *J Vet Behav.* 2022. <https://doi.org/10.1016/j.jveb.2022.06.004>
25. Fitri H, Suhaemi S. Hipertensi emergensi. *GALENICAL: J Kedokteran dan Kesehatan Mahasiswa Malikussaleh.* 2023;2(6).
26. Fitria NE, Desnita R, Guci A, Sutiawan A, Yeni GP, Amardya V, et al. Pendekatan terapi komplementer untuk penatalaksanaan hipertensi. *J Abdi Mercusuar.* 2023;3(1):60–68. <https://doi.org/10.36984/Jam.V3i1.391>
27. Febrianingrum K, Triana N, Wahyu TN, Su'udi. Pola makan dan aktivitas fisik dengan kejadian hipertensi di Puskesmas Semanding Kabupaten Tuban. *J Ilmu Kesehatan Mandira Cendikia.* 2024;3(8).
28. Hendriana Y, Septiadi D, Nugraha MD. Pengaruh terapi rendam kaki dengan air rebusan jahe dan serai terhadap penurunan tekanan darah pada lansia hipertensi di Desa Paninggaran Kecamatan Darma Kabupaten Kuningan. In: *National Nursing Conference;* 2023;1(2):253–263.
29. Fitri H, Suhaemi S. Hipertensi emergensi. *GALENICAL: J Kedokteran dan Kesehatan Mahasiswa Malikussaleh.* 2023;2(6).
30. Hasanuddin I, Zainab Z, Purnama J. Hubungan pola makan dan aktivitas fisik dengan kejadian hipertensi. *J Ners.* 2023;7(2):1659–1664. <https://doi.org/10.31004/jn.v7i2.15962>
31. Heriyanto H, Nugraha BA, Hariadi E. Kombinasi rebusan jahe dan madu menurunkan tekanan darah pada lansia dengan hipertensi. *J Keperawatan Raflesia.* 2022;4(2):2656–6222. <https://doi.org/10.33088/jkr.v4i2.817>
32. Istyawati P, Prastiani DB, Rakhman A. Efektifitas slow stroke back massage (SSBM) dalam menurunkan skala nyeri kepala pasien hipertensi di Rumah Sakit Mitra Siaga Tegal. *Coping: Community of Publishing in Nursing.* 2020;8(2):207.
33. Imelda I, Sjaaf F, Puspita T. Faktor-faktor yang berhubungan dengan kejadian hipertensi pada lansia di Puskesmas Air Dingin Lubuk Minturun. *Health & Med J.* 2020;2(2):68–77. <https://doi.org/10.33854/Heme.V2i2.532>
34. Kemenkes RI. Survei Kesehatan Indonesia dalam rangka data akurat kebijakan tepat. 2023. Jakarta: Kementerian Kesehatan; 2023.
35. Khairullah R, Dhani F, Asriah T. Gambaran tekanan darah pada lansia di puskesmas Kecamatan Sebatik Barat Kabupaten Nunukan. *J Abdi Masyarakat Penuh Makna.* 2021;7(1):189–193.
36. Kurniawati W, Uswatun H. Efektifitas pemberian terapi biofeedback terhadap penurunan tekanan darah pada penderita hipertensi di Puskesmas Taman Sari, Kota Bandung. *J Keperawatan Indonesia.* 2024;9(2):117–123.
37. Kusumaningrum I, Hermawan P. Pengaruh konsumsi air rebusan daun seledri terhadap penurunan tekanan darah pada penderita hipertensi. *J Ilm Kesehatan Pembangunan.* 2023;12(3):34–45.

38. Liawati S. Pengaruh terapi madu terhadap penurunan tekanan darah pada pasien hipertensi. *J Terapis*. 2021;3(2):245–252.
39. Lestari H, Yuliana R. Pengaruh pengelolaan stres terhadap penurunan tekanan darah pada penderita hipertensi. *J Kesehatan Cendikia*. 2022;4(1):61–67.
40. Lukman D, Yuliani E. Pengaruh metode relaksasi terhadap penurunan tekanan darah pada penderita hipertensi. *J Ilmu Kesehatan Islam*. 2021;9(1):72–77.
41. Mulyani S, Sari R, Diah V, Mahendri T. Pengaruh terapi musik terhadap penurunan tekanan darah pada pasien hipertensi. *J Ilm Keperawatan*. 2023;15(1):58–62.
42. Mutia R. Pemberian teh hijau terhadap penurunan tekanan darah pada penderita hipertensi. *J Kebidanan dan Keperawatan*. 2021;3(4):168–176.
43. Nurmala D, Ginting I. Efek pemberian jahe terhadap penurunan tekanan darah pada lansia dengan hipertensi di Puskesmas Cibodas Kota Tangerang. *J Penelitian dan Pengabdian Kesehatan*. 2023;13(5):128–136.
44. Ningsih R, Hidayat S, Mardian M. Hubungan aktivitas fisik dengan kejadian hipertensi di wilayah kerja Puskesmas Cikadu. *J Abdi Masyarakat Sehat*. 2023;7(2):205–211.
45. Ossa C, Ruiz L. The role of diet in hypertension management in Latin America. *Latin Am Heart J*. 2024;7(1):22–29.
46. Purbasari N, Widiastuti A. Efektivitas terapi relaksasi terhadap penurunan tekanan darah pada penderita hipertensi di Puskesmas Sumur Bandung. *J Keperawatan Masyarakat*. 2022;9(2):211–217.
47. Putra W. Kombinasi jahe dan lemon dalam menurunkan tekanan darah pada lansia dengan hipertensi. *J Kesehatan Bahagia*. 2022;5(1):118–124.
48. Purnama A, Wijaya F. Efektivitas terapi kognitif terhadap penurunan tekanan darah pada penderita hipertensi. *J Psikologi dan Kesehatan Masyarakat*. 2022;9(1):88–93.
49. Santosa B, Syafrudin M. Pengaruh pola makan terhadap kejadian hipertensi pada lansia. *J Kesehatan dan Gizi*. 2021;6(4):45–52.
50. Sari Y, Riana W, Irawan H. Pengaruh terapi pijat refleksi terhadap penurunan tekanan darah pada pasien hipertensi. *J Kesehatan Unpad*. 2023;12(2):78–86.