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**Blood Pressure Overview of Hypertension Patients With Complementary Therapy Implementation of Tomato Juice in RT 05 RW 04 Pulo Gebang Village, Cakung District, East Jakarta**

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**Abstract**

Complementary therapy is a health method that is applied in conjunction with conventional medicine to improve the health of patients. These techniques include acupuncture, massage, and the use of herbs. Complementary therapy should be used safely and effectively as a complement to care, especially in the context of family nursing care. Family nurses have an important role in helping families overcome health problems in sick family members, one of which is a family member with hypertension. Hypertension or high blood pressure is a condition where blood pressure exceeds 140/90 mmHg. One of the complementary therapies to lower blood pressure is the administration of tomato juice. The author uses a descriptive case study design with a nursing process approach to hypertensive patients. The author will look at the description of nursing care for hypertensive patients with the administration of tomato juice to determine whether it can lower blood pressure. When the initial blood pressure measurement was 150/98 mmHg and after complementary therapy with tomato juice for 4 days given twice a day in the morning and evening, blood pressure decreased to 145/92 mmHg.

Keywords: Hypertension; Tomato Juice; Lowering Blood Pressure; Complementary Therapy

**Introduction**

According to the Ministry of Health (2020), complementary therapy includes a variety of health practices that are used in conjunction with conventional medical treatment to improve the health and well-being of patients. These methods include acupuncture, massage, and the use of herbs. The Ministry of Health emphasizes that complementary therapies must be applied safely and effectively as an adjunct to the health care system. Medically, complementary therapies have been shown to be an effective adjunct that supports primary care.

In nursing practice, this therapy can be applied in various aspects of care, including in family nursing care. Family nurses have an important role in helping families overcome

health problems by improving the family's ability to carry out health care functions and tasks. In helping families who have family members who have hypertension, nurses play a role in providing health education so that families can carry out independent care, act as coordinators to organize activity programs or from various disciplines, act as health supervisors, become consultants in solving problems, and function as facilitators in providing basic care to family members who are sick, one of which is a family member who suffers from hypertension (Mayastika, 2022).

Hypertension or high blood pressure is a condition where blood pressure exceeds 140 mmHg for systolic blood pressure and 90 mmHg for diastolic blood pressure. Systolic blood pressure is the pressure measured when the heart contracts and reaches its highest

number, while diastolic pressure is the pressure measured when the heart relaxes and reaches its lowest number. (Septimar, et al. 2020), in (Potabuga et al., 2024).

Hypertension is a significant cause of premature death worldwide, and the problem is increasing over time. It is a serious problem for a large part of the global population, hypertension affects at least 22% of the world's population. According to data from the World Health Organization (WHO), it is estimated that the number of hypertension cases globally currently reaches 22% of the world's population, with Africa having the highest number of cases reaching 27%.

Southeast Asia is in third place with the number of cases around 33.82% of the world's population. According to WHO (2020), in Sakina, et al (2023). According to WHO in 2021, in Indonesia, the prevalence of hypertension shows a significant ranking with increasing age, from 31.6% in the 35-44 year age group increasing by 13.7% to 45.3% in the 45-54 year age group (M. Oktaria et al, 2023). Nationally, DKI Jakarta is ranked ninth in the prevalence of hypertension at 33.43%. (WHO, 2021 in Nuraisyah and Kusumo, 2021).

Hypertension is a major risk factor for heart disease, congestive heart failure, stroke, visual impairment, and kidney disease. Increased blood pressure generally increases the risk of these complications. If left untreated, hypertension can affect the entire organ system and can ultimately reduce life expectancy by 10-20 years. (Nuraini 2015, in Oktaria et al., 2023).

Hypertension can be controlled through pharmacological and non-pharmacological therapy. Pharmacologically, hypertension control aims to prevent and reduce the risk of disease, complications, and death. This approach can be divided into pharmacological and non-pharmacological. Pharmacological therapy begins with the administration of a single drug that has a long period of action so that it is sufficient to be consumed once a day. (Ministry of Health of the Republic of Indonesia 2019, in

Novianti et al., 2022).

A healthy lifestyle can prevent or slow the onset of hypertension and reduce cardiovascular risk. One step in implementing a healthy lifestyle is to increase the consumption of vegetables and fruits, such as consuming tomato juice. Tomatoes contain lycopene, a very powerful antioxidant compared to other antioxidants. Lycopene is insoluble in water and is tightly bound to fiber, with lycopene levels in red tomatoes of 4,600 µg per 100 grams.

The anti-inflammatory effects of lycopene can reduce cell damage that can trigger atherosclerosis, which causes increased blood pressure. (Nugroho, 2019 in Novianti et al., 2022). In addition, tomatoes have good nutritional content, including 1.1 grams of fiber and 19.1 mg of vitamin C per 100 grams, and can be consumed as vegetables or fresh. (Dia, 2019 in Novianti et al., 2022).

Based on research conducted by Hamna Vonny Lasanuddin et al. (2023), there was a decrease in blood pressure after being given tomato juice. Systolic blood pressure from 146.67 mmHg to 131 mmHg and diastolic blood pressure from 91.33 mmHg to 84.33 mmHg.

The decrease in blood pressure after consuming tomato juice in this study was caused by potassium intake from tomatoes, which is the main variable that affects the decrease in blood pressure. In this study, subjects received tomato juice with a dose of 363 mg of potassium per day obtained from 150 grams of tomatoes provided by researchers (Lasanuddin et al., 2023).

## Method

This writing method is descriptive using a case study approach. This study includes one research unit, namely using research subjects. This case study aims to analyze the application of complementary therapy of tomato juice to reduce blood pressure in Mr. A's family, especially Mrs. S with hypertension.

## Results and Discussion

### Focus Data

**Subjective Data** Mrs. S said she had had hypertension for the past 3 months, Mrs. S said she did not fully understand hypertension but knew the symptoms of hypertension, such as dizziness and headaches, Mrs. S's family said they did not know how to treat hypertension, During the assessment Mrs. S said she felt a headache, dizziness, and pain in her neck, Mrs. S said she had reduced eating salty foods, Mrs. S said she did not take medication regularly, Mrs. S said she had gone to the nearest clinic. Mrs. S said that if the pain could not be controlled, she would be taken to a health service. **Objective Data:** Examination of Mrs. S's TTV. S: BP: 150/98mmHg, N: 98x/minute, S: 36.5°C, RR: 20x/minute.

### Diagnosis

The diagnosis obtained in this case study is in accordance with the data found during the assessment, physical examination, and stage II exploration of Mr. A's family, especially Mrs. S, namely the diagnosis of ineffective family health management (Hypertension).

### Problem Screening:

In this case, the author conducted a screening using criteria in accordance with the theory, with a score adjusted to the family's condition. The results showed the highest score for the problem of ineffective family health management (hypertension) in Mrs. S, with a score of 4 2/3. The nature of the problem in the diagnosis of ineffective family health management is actual because the nature of the problem already exists and is being felt.

### Planning

In making this scientific paper, the author describes the main priority problem, namely ineffective family health management in Mr. A's family, especially Mrs. S who suffers from hypertension. Nursing planning for this diagnosis is to discuss with the family about the definition, causes, and signs of hypertension symptoms. discuss with the family about the effects and ways to prevent

hypertension, and discuss with the family about health facilities that they can use. After the planning, the next step is implementation, at the implementation stage, the author observed one of the nursing actions, namely complementary therapy by giving tomato juice to see if there was a decrease in blood pressure after giving the juice.

### Implementation

To help the family in carrying out nursing functions. At the implementation stage, the author observed one of the nursing actions, namely complementary therapy by giving tomato juice to see if there was a decrease in blood pressure after giving the juice. Observations were carried out for the next 4 days, by measuring blood pressure on the first day of drinking tomato juice and the fourth day during the evaluation.

The author comes every day to make and give tomato juice to family members who suffer from hypertension, namely Mrs. S, with a dose of 400 ml which is drunk twice a day in the morning and evening. Blood pressure was measured on the first day before drinking tomato juice and the fourth day after drinking tomato juice to assess the effectiveness of this complementary therapy. After 4 days, there was a decrease in blood pressure.

### Evaluation

Based on observations of tomato juice complementary therapy conducted by the author, it can be concluded that the use of tomato juice as a complementary therapy is able to lower blood pressure. During the 4-day observation, there was a decrease in blood pressure. Systolic blood pressure decreased from 150 mmHg to 145 mmHg, while diastolic blood pressure decreased from 98 mmHg to 92 mmHg.

### Conclusion

At the implementation stage, all plans can be implemented according to the family's capabilities. The supporting factor in this implementation is the very good level of cooperation from Mr. A's family. Based on the results of the theory, previous research,

and the results of the application that has been carried out by the author, there is a difference in the time of administration and dosage of tomato juice. However, from the results of previous studies with the results of the research conducted by the author, there is a positive effect of complementary therapy in the form of giving tomato juice on reducing blood pressure in people with hypertension. At the nursing evaluation stage, the family nursing diagnosis regarding ineffective family health management in Mrs. S who suffers from hypertension shows that the problem is resolved.

## References

1. Amallia, R. N. (2021). *Asuhan Keperawatan Keluarga Tn. S dengan Masalah Utama Hipertensi pada Ny. S di Desa Karang Sari RT 02 RW 05 Kecamatan Karang Tengah Kab. Demak*. 10.
2. Astuti, S. D., dan Lucia, F., P., K. (2020). Asuhan Keperawatan Keluarga Dengan Hipertensi. *Buletin Kesehatan: Publikasi Ilmiah Bidang kesehatan*, 3(1), 83. <https://doi.org/10.36971/keperawatan.v3i1.62>
3. Kementerian Kesehatan Republik Indonesia. (2020). *Panduan Penggunaan Terapi Komplementer dalam Pelayanan Kesehatan di Indonesia*. Jakarta: Kementerian Kesehatan RI.
4. Kusuma, S. I, dkk. (2023). *Keperawatan Keluarga*. CV. Adanu Abimata.
5. Lasanuddin, dkk. (2023). Pengaruh Pemberian Jus Tomat Terhadap Penurunan Tekanan Darah Pada Penderita Hipertensi Di Wilayah Kerja Puskesmas Telaga. *Jurnal Kesehatan Tradisional*, 1(2).
6. Mahera, U. (2022). *Pengkajian Tahap 1 Asuhan Keperawatan Keluarga*. Mediaperawat.id. [https://mediaperawat.id/pengkajian-tahap-1-asuhan-keperawatan-keluarga/#google\\_vignette](https://mediaperawat.id/pengkajian-tahap-1-asuhan-keperawatan-keluarga/#google_vignette)
7. Mayastika, Y. H. (2022). Asuhan Keperawatan Keluarga dengan Hipertensi di wilayah kerja puskesmas Depok. *Journal Article*, 6(6), 9–33.
8. Mulyasari, S., Wurjanto, M. A., Hestinationsih, R., dan Adi, M. S. (2023). Hubungan Antara Riwayat Hipertensi Dalam Keluarga, Status Merokok, Dan Konsumsi Garam Dengan Kejadian Hipertensi Pada Usia 35-59 Tahun Di Wilayah Kerja Puskesmas Kebumen I. *Jurnal Kesehatan Masyarakat*, 11(6), 639–644. <https://doi.org/10.14710/jkm.v11i6.38172>
9. Nadirawati. (2018). *Buku Ajar Asuhan Keperawatan Keluarga: teori dan aplikasi praktik*. PT. Refika Aditama.
10. Nies, M. A., dan McEwen, M. (2019). *Keperawatan Kesehatan Komunitas dan Keluarga*. Elsevier.
11. Novianti, D. P., Sulendri, N. K. S., Lutfiyah, F., dan Suhaema, S. (2022). Pengaruh Pemberian Buah Tomat (*Solanum Lycopersicum*) terhadap Penurunan Tekanan Darah pada Pasien Hipertensi. *Student Journal of Nutrition (SJ Nutrition)*, 1(1), 33–40.
12. Nuraisyah, F., dan Kusumo, H. R. (2021). Edukasi Pencegahan dan Penanganan Hipertensi Untuk Meningkatkan Kualitas Hidup Pada Lansia. *BAKTI: Jurnal Pengabdian Kepada Masyarakat*, 1(2), 35–38. <https://doi.org/10.51135/baktivo11iss2pp35-38>
13. Oktaria, M., Hardono, H., Wijayanto, W. P., dan Amiruddin, I. (2023). Hubungan Pengetahuan dengan Sikap Diet Hipertensi pada Lansia. *Jurnal Ilmu Medis Indonesia*, 2(2), 69–75. <https://doi.org/10.35912/jimi.v2i2.1512>
14. Polopadang, V., dan Hidayah, N. (2019). Proses Keperawatan. In *Universitas Nusantara PGRI Kediri* (Vol. 01). Yayasan Pemberdayaan Masyarakat Indonesia Cerdas.
15. Potabuga, A. P. U., Laya, A. A., dan Yahya, I. M. (2024). Pengaruh Pemberian Jus Tomat Terhadap Tekanan Darah Pada Penderita Hipertensi di Kelurahan Mahawu Lingkungan II Kota Manado. *Jurnal Ilmu Keperawatan dan*

- Kebidanan*, 2(1), 105–116.
16. Rahmawati, R., dan Kasih, R. P. (2023). Hipertensi Usia Muda. *Galenical: Jurnal Kedokteran dan Kesehatan Mahasiswa Malikussaleh*, 2(5), 11. <https://doi.org/10.29103/jkkmm.v2i5.10478>
  17. Rasmini, N., M. dkk. (2017). Panduan Asuhan Keperawatan, Individu, Keluarga, Kelompok, Komunitas dengan Modifikasi NANDA, ICNP, NOC, dan NIC di Puskesmas dan Masyarakat. Universitas Indonesia (UI-Press).
  18. Sakina, Suaib, dan Situmorang, W. (2023). Pengaruh Jus Tomat Terhadap Penurunan Tekanan Darah Pada Penderita Hipertensi Di Desa Walatana Wilayah Kerja Puskesmas Baluase. *Gudang Jurnal Ilmu Kesehatan*, 1(1), 27.
  19. Saragih, M., Aryanti, D., dan Yuliza, E. I. (2022). *Asuhan Gizi dan Keperawatan pada Hipertensi*.
  20. Septiara, K. I. (2022). Analisis Asuhan Keperawatan Hipertensi Pada Ny. Y Dengan Pemberian Jus Mentimun Di wilayah Kerja Puskesmas Taragong. *Science*, 7(1), 19–20.
  21. Suprpto, S., dan Karsa, P. S. (2023). Keperawatan Keluarga: Pendekatan Komprehensif Dalam Perawatan Kesehatan Keluarga. In *Keperawatan Keluarga* (Nomor November).
  22. Tambunan, F. F., Nurmayni, Rahayu, P. R., Sari, P., dan Sari, S. I. (2021). *Hipertensi (Si Pembunuh Senyap)*. CV. Pusdikra Mitra Jaya.