

THE EFFECT OF JASELAM (GINGER, LEMONGRASS, AND BAY LEAF) ON BLOOD PRESSURE REDUCTION IN HYPERTENSIVE PATIENTS WITH ACUTE PAIN AS A NURSING ISSUE

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ABSTRACT

Introduction

Hypertension is a noncommunicable disease characterized by elevated blood pressure above normal levels and can cause headaches. In East Java, the prevalence of hypertension among those aged 18 and older increased from 26.2% to 36.3%.

Method

A single-case study was conducted on a client and their family with hypertension in Kalijudan Village, Mulyorejo Subdistrict, involving the administration of jaselam decoction for 7 days from March 5–11, 2026, at a dose of 100 ml/day. Evaluation was performed through blood pressure checks and pain measurement using the Numeric Rating Scale (NRS).

Result

The assessment identified the primary issue as acute pain (D.0077) related to increased vascular pressure due to hypertension, characterized by the client complaining of a headache and a blood pressure of 151/84 mmHg. The primary intervention was pain management (I.08238). Evaluation results showed improved pain control, indicated by a decrease in blood pressure to 135/91 mmHg and a reduction in the pain scale from 5 to 1.

Conclusion

The administration of complementary therapy in the form of a decoction of ginger, lemongrass, and bay leaves for 7 days helped reduce headaches and lower blood pressure in the hypertensive client.

INTRODUCTION

Hypertension, or high blood pressure, is a condition characterized by systolic blood pressure of ≥ 140 mmHg and/or diastolic blood pressure of ≥ 90 mmHg, as measured on multiple occasions, and can increase the risk of cardiovascular diseases such as stroke and heart disease (Ministry of Health, 2022). Hypertension is known as the “silent killer” because it often causes no symptoms, yet it leads to the deaths of millions of people each year (WHO, 2023). The WHO estimates that the number of people with hypertension will reach 1.5 billion by 2025, with approximately 9.4 million deaths per year (WHO, 2024). In Indonesia, hypertension is the leading risk factor for the fourth leading cause of death, accounting for 10.2% of deaths (Ministry of Health, 2024). In East Java, the prevalence of hypertension has risen to 36.3%, making it one of the six provinces with the highest rates in Indonesia (East Java Provincial Health Office, 2023).

Efforts to control hypertension are carried out through the CERDIK Program, which includes routine health checkups, avoiding tobacco, physical activity, a balanced diet, adequate rest, and stress management (Ministry of Health, 2023). Hypertension management generally relies on pharmacological therapy; however, long-term use can cause side effects, leading to the increasing use of herbal complementary therapies (Sukun et al., 2024). Herbal plants are considered safer, more readily available, and more economical (Sutik et al., 2022).

One of the herbal therapies used is a decoction of ginger, lemongrass, and bay leaves, which contain flavonoids to help lower blood pressure. Bay leaves act as a diuretic due to their flavonoid, tannin, and essential oil content (Wibowo, 2021). Lemongrass contains flavonoids and minerals that help increase urine production and inhibit the Renin-Angiotensin-Aldosterone System (RAAS) (Sutik et al., 2022). Meanwhile, the flavonoids in ginger inhibit the ACE enzyme, thereby triggering vasodilation and lowering blood pressure (Hastuti, 2021).

METHOD

The approach in this case study employs family nursing care for the elderly, which

encompasses individual conditions, the environment, lifestyle, daily habits, and social support that influence the health of the elderly. Data were obtained through interviews, observations, and physical examinations of Mrs. S. The intervention provided consisted of a decoction of ginger, lemongrass, and bay leaves (jaselam), to be consumed once daily after meals.

Before the intervention was carried out, the client and her family were given an explanation of the purpose and procedure of the intervention and were asked to sign an informed consent form. The initial assessment included an interview, physical examination, and blood pressure measurement. On the first day, the client and her family were also educated about hypertension, the benefits of the jaselam decoction, and how to prepare it. Blood pressure was measured before and after consumption of the beverage.

The client was advised to consume the decoction in the evening before bedtime, continue taking antihypertensive medication as prescribed by the doctor, and limit foods high in salt and fat.

RESULT

Mrs. S is 75 years old with a history of hypertension since the age of 30. The client has been complaining of pain in the upper part of her head for the past month, especially when exposed to the sun and after being active outdoors for too long.

A blood pressure measurement on March 3, 2025, showed a reading of 151/84 mmHg. Based on the assessment using the PQRST approach, the nursing diagnosis established is acute pain related to increased cerebral vascular pressure, as evidenced by the client's complaints of headache, grimacing, and a blood pressure of 151/84 mmHg (PPNI, 2017).

The intervention consisted of nonpharmacological therapy involving a 100-ml decoction of ginger, lemongrass, and bay leaves (jaselam), consumed once daily in the evening for 7 consecutive days. In addition, blood pressure was monitored periodically from March 4–12, 2026.

The monitoring results showed a gradual decrease in blood pressure from 160/89 mmHg with a pulse of 72 beats per minute to 135/91 mmHg with a pulse of 74 beats per minute. On the first through third days, the client still complained of headaches of relatively the same intensity, whereas on the fourth through seventh days, the complaints of headaches began to gradually decrease.

DISCUSSION

Assessment

Blood pressure is considered high if it is >140/80 mmHg and is measured under different conditions (AHA, 2025). Mrs. S is complaint of headaches is consistent with the study by Supriadi et al. (2024), which states that headaches in hypertension occur due to increased blood flow in the brain's blood vessels, thereby causing pain in the head. This condition can trigger narrowing of blood vessels, which is one of the main causes of headaches. The pain mechanism may be triggered by muscle spasms in the neck arteries, leading to anaerobic metabolism and increased lactic acid production (Nusa Laut et al., 2021). Additionally, headaches in hypertension are associated with vascular disorders that trigger the body's pain response with varying intensities (Ferdisa & Ernawati, 2021). If left untreated, the pain can disrupt daily activities and reduce the client's quality of life (Pratitdya, 2021).

Nursing Diagnosis

The nursing diagnosis of acute pain for Mrs. S was established based on her complaint of headaches that worsened during outdoor activities and when exposed to the sun. This is consistent with the study by Jingwei et al. (2025), which states that exposure to heat waves is associated with acute increases in blood pressure among elderly individuals with hypertension. Older adults aged 65 years or older with chronic conditions are more sensitive to changes in environmental temperature, making it easier for their blood pressure to rise. As a result of the pain experienced, the client's daily activities are disrupted.

Nursing Interventions

Interventions were given in the form of nonpharmacological therapy using a decoction of ginger, lemongrass, and bay leaves (jaselam). A nonpharmacological approach is considered safer and can enhance the effectiveness of antihypertensive therapy compared to medication alone (Fuad & Sarah, 2022). The gingerol content in ginger helps lower blood pressure through vasodilation, antioxidant activity, and inhibition of the renin-angiotensin system (Farid Yusuf, 2019). The citral and citronellal compounds in lemongrass play a role in relaxing the smooth muscles of blood vessels, thereby reducing peripheral resistance (Kristiani, 2020). Meanwhile, the flavonoids and essential oils in bay leaves work through vasodilation and improved vascular endothelial function (Musmualidin & Puvita, 2024).

Nursing Implementation

The program was implemented over a 7-day period, with the client given 100 ml of jaselam herbal tea every night before bed. During the implementation process, blood pressure was monitored periodically to track changes in the client's condition. This aligns with the research by Pranata et al. (2024), which states that regular consumption of herbal tea can help gradually lower blood pressure and maintain its stability. The ginger, lemongrass, and bay leaf content helps improve blood circulation, relaxes blood vessels, and reduces risk factors for high blood pressure.

Evaluation

The reduction in Mrs. S headache was consistent with the decrease in blood pressure following the intervention. Headaches in hypertension occur due to increased pressure in the blood vessels of the brain, which triggers vasoconstriction and a mild increase in intracranial pressure (Setiadi et al., 2024). As blood pressure begins to decrease, the load on the blood vessel walls is reduced, resulting in more stable blood flow and improved cerebral tissue perfusion.

These results indicate a decrease in blood pressure from 160/89 mmHg to 135/91 mmHg following 7 days of jaselam administration. A study by Kristiani and Ningrum (2020) demonstrated that consuming 100 ml of ginger drink for 5 days can help lower blood pressure due to its gingerol and potassium content. Research by Trio and Husnin (2024) also states that lemongrass decoction is effective in helping to lower blood pressure through the

inhibition of Angiotensin Converting Enzyme (ACE). Additionally, research by Annisa Rahmalia et al. (2021) shows that bay leaf decoction can help lower blood pressure through the activity of flavonoids as antioxidants and vasodilators. The combination of these three herbal ingredients provides a synergistic effect in helping to control blood pressure (Musmualidin & Pusvita, 2024).

There was a decrease in blood pressure; however, monitoring results still showed fluctuations in blood pressure, which were likely influenced by the client's diet, activity level, and lifestyle. Consuming foods high in salt and fat can increase fluid retention and blood volume, thereby keeping blood pressure elevated (Mahmudah et al., 2025). Additionally, adherence to antihypertensive medication is a key factor in successfully controlling blood pressure (Annisa et al., 2024).

CONCLUSIONS

Based on the results of family nursing care provided to Mrs. S over a 7-day period, the nursing issue identified was acute pain resulting from increased cerebral vascular pressure, characterized by a headache and blood pressure of 151/84 mmHg. Non-pharmacological interventions, consisting of administering 100 ml of a decoction of ginger, lemongrass, and bay leaves (jaselam) daily, along with education on healthy lifestyle habits and blood pressure monitoring, yielded positive results.

Evaluation showed a gradual reduction in headaches as well as a decrease in blood pressure from 160/89 mmHg to 135/91 mmHg. Thus, the decoction of ginger, lemongrass, and bay leaves (jaselam) is effective in helping to lower blood pressure and reduce pain in patients with hypertension..

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