
The Effect Of Young Coconut Water On Hypertension Sufferers In Baroh Village Montasik District Aceh Besar

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Abstract

Hypertension is a condition in which a person's blood pressure rises above normal limits. Young coconut water is an isotonic drink that contains almost all minerals, with the highest potassium (K) content. This study aims to determine the effect of young coconut water on lowering blood pressure in people with hypertension. This study used a quantitative method with a quasi-experimental design of the one-group pretest-posttest type. The population consisted of 60 hypertensive patients, and a sample of 15 people was selected using purposive sampling. The measuring instruments used were observation sheets and sphygmomanometers. This study was conducted in Baroh Village from June 24 to 30, 2025. The results showed a decrease in systolic blood pressure from 150.93 mmHg to 149.93 mmHg and diastolic blood pressure from 80.73 mmHg to 78.20 mmHg with a p-value of 0.000 ($p < 0.05$), indicating a significant effect. The conclusion is that young coconut water has an effect on hypertensive patients in Baroh Village, Montasik District, Aceh Besar.

Keywords: *Young Coconut Water, Patients, Hypertension.*

INTRODUCTION

Noncommunicable diseases (NCDs), also known as degenerative diseases, are categorized as one of the public health concerns of the 21st century due to their high morbidity and mortality rates globally. According to a WHO report, non-communicable diseases are identified as the leading cause of death worldwide, with approximately 36 million people dying each year. The most common types of non-communicable diseases suffered by the community include heart disease, stroke, hypertension, diabetes mellitus, cancer, and chronic kidney disease. Chronic kidney disease has increased from 2 percent to 3.8 percent, as has diabetes mellitus, which increased from 6.9 percent to 8.5 percent in 2018. The highest increase occurred in hypertension, which rose from 25.8 percent to 34.1 percent (Sudaya et al., 2020).

Hypertension is classified into two types based on its cause, namely primary hypertension and secondary hypertension. Primary hypertension has no clear clinical cause and is estimated to occur in around 95% of patients, with genetic factors as the main trigger. Meanwhile, secondary hypertension is caused by certain conditions, such as renal artery stenosis, pregnancy, or the use of certain medications. If left uncontrolled, hypertension can cause complications in various organs, including the heart, brain, kidneys, eyes, and peripheral arteries (Kifle, Adugna, Chanie, & Mohammed, 2022).

Hypertension can be controlled through pharmacological and non-pharmacological therapy. Pharmacological therapy involves the use of antihypertensive drugs to lower blood pressure, such as ACE inhibitors, diuretics, antagonists, calcium channel blockers, and vasodilators (Trisnawati, 2019). One non-pharmacological therapy in treating hypertension is by consuming coconut water. Coconut water contains various important substances, such as sugar, minerals, vitamins, calcium, and potassium. Potassium plays a role in maintaining muscle function, heart function, the nervous system, and helps regulate blood pressure. Regular consumption of coconut water can increase potassium levels in the body, which is beneficial for people with hypertension (Sari & Purwono, 2022).

World Health Organization (WHO) data estimates that by 2023, the prevalence of hypertension will reach 33%, with two-thirds of sufferers coming from poor and developing countries (WHO, 2023). As time goes on, the number of people with hypertension is predicted to continue to increase and is estimated to reach 1.5 billion people worldwide by 2025. According to the American Heart Association (AHA), the number of people with hypertension in the United States aged over 20 years

old reached around 74.5 million people. However, nearly 95% of these cases were not detected (WHO, 2023).

Hypertense causes around 8 million deaths each year, with 1.5 million deaths occurring in Southeast Asia, where one-third of the population suffers from this condition. According to the results of the 2018 Indonesian Basic Health Research (Riskedas) 2018, the prevalence of hypertension among people aged 18 years and reached 34.1%. The highest prevalence was recorded in South Kalimantan, namely 44.1%, while the lowest was in Papua, with a rate of 22.2%. Hypertension is also found in various age groups, such as 31.6% in the 31-44 age group, 45.3% in the 45-54 age group, and 55.2% in the 55-64 age group. Tangerang Regency is recorded as the area with the highest number of cases in Banten Province (Laurensia et al., 2022).

Based on the 2018 National Health Research Report, Aceh Province ranked 27th out of 34 provinces with a prevalence of hypertension of 26.45%. In 2020, as many as 385,813 hypertension sufferers in Aceh, or around 32%, had received standard health services. In addition, there were four districts/cities in Aceh whose service coverage reaches 100%, namely Aceh Tenggara, Aceh Barat Daya, Aceh Tamiang, and Kota Sabang. (Profil Kesehatan Aceh, 2021).

Based on preliminary data obtained in the Montasik Community Health Center Working Area, Aceh Besar Regency, the number of people with hypertension has increased. In 2023, there were 991 patients, while in 2024 the number increased to 1,021 patients. Hypertension cases in this region are most commonly found in three main villages, namely Bak Dilip Village, Lampaseh Lhok Village, and Baroh Village.

Based on interviews and observations with 10 people with hypertension, 6 respondents said stated that they were unaware of the benefits of coconut water in reducing blood pressure, while 2 other respondents knew the benefits of coconut water but had never tried it, and 2 respondents said they only consumed medicines.

Based on the above description, the researcher was interested in conducting research with the title: "The Effect of Young Coconut Water on Blood Pressure Reduction in Hypertensive Patients in the Working Area of the Montasik Community Health Center, Aceh Besar Regency."

RESEARCH METHODS

This study used a quasi-experimental method with a one-group pretest-posttest approach. In this design, there was only one group. The one-group pretest-posttest design included pre-experimental measurement (measurement before treatment), treatment (implementation), and post-experimental measurement (measurement after the experiment).

RESULTS AND DISCUSSION

The result of the study on the effect of young coconut water on hypertensive patients in Baroh Village, Montasik District, Aceh Besar is as follows:

Tablet 1. The Effect of Blood Pressure After Giving Young Coconut Water in Baroh Village, Montasik District, Aceh Besar Regency

| The Effect of Blood Pressure | f | % |
|------------------------------|----|-------|
| There is an effect | 14 | 93,3 |
| There is no effect | 1 | 6,7 |
| Amount | 15 | 100,0 |

The results indicated that blood pressure changes after consuming young coconut water affected 14 respondents (93.3%) and did not affect 1 respondent (6.7%).

Tablet 2. The Effect of Young Coconut Water on Blood Pressure

| Young Coconut Water | Blood Pressure | | | | | | P-Value |
|---------------------|----------------|-----------|---------------|-----------|------------|-----------|---------|
| | Mean Pretets | | Mean Posttest | | Difference | | |
| | Systolic | Diastolic | Systolic | Diastolic | Systolic | Diastolic | |
| Pretest-Posttest | 150,93 | 80,73 | 149,93 | 78,20 | 1 | 2,53 | 0,000 |

This can be determined before administering water and the average systolic blood pressure response is 150.93 mmHg and the diastolic blood pressure is 80.73 mmHg, while after coconut water, the average systolic blood pressure became 149.93 mmHg and the diastolic blood pressure became 78.20 mmHg with a difference in systolic blood pressure of 1 mmHg and diastolic blood pressure of 2.53 mmHg with a ρ value of 0.000, indicating that young coconut water has an effect on hypertension in Baroh Village, Montasik District, Aceh Besar.

The results of the study indicate that before being given coconut water and the average systolic blood pressure response is 150.93 mmHg and the diastolic blood pressure is 80.73 mmHg, while after coconut water was administered, the average systolic blood pressure became 149.93 mmHg and the diastolic blood pressure became 78.20 mmHg with a difference in systolic blood pressure of 1 mmHg and diastolic blood pressure of 2.53 mm Hg with a ρ value of 0.000, meaning that coconut water has an effect on lowering blood pressure.

Another study conducted by Rita Sari and Janu used the Quaasy Experiment design. The results of the study show that there is a significant effect of coconut water consumption on blood pressure reduction, with a p-value = 0.003, which is smaller than $\alpha = 0.05$. This indicates that coconut water is effective in helping to lower blood pressure.

One way to reduce blood pressure is through non-pharmacological therapy such as drinking young coconut water. Young coconut water contains high levels of potassium and low levels of sodium. In addition, coconut water also contains vitamin C and magnesium. Potassium can reduce renin secretion, which causes angiotensin II to decrease, thereby reducing blood vessel vasoconstriction. Potassium also plays a role in the Na-K pump, where potassium is pumped from the extracellular fluid into the cell, and sodium is pumped out. The Na-K pump occurs due to the presence of magnesium that activates the cell membrane which pumps sodium out and potassium into the cell so that blood pressure drops. This further reduces the likelihood of heart disease and hypertension. Blood pressure regulation is the most important function of this mineral (Fahreza et al., 2014).

CONCLUSIONS

Based on the results obtained from respondents after conducting research from June 24 to 30, 2025, it can be concluded that young coconut water has an effect on hypertensive patients in Baroh Village, Montasik District, Aceh Besar with a p-value of 0.000.

REFERENCES

- Fahreza, A ., Putri, L ., & Kurniawan, D. (2014). Faktor-faktor yang berhubungan dengan kejadian hipertensi pada lansia. *Jurnal Kesehatan Masyarakat*, 10 (2), 77 – 84 .
- Kifle, Z. S., Adugna, M., Chanie, G. S., & Mohammed, A. (2022). Prevalence and Associated Factors of hypertension complications Among Hypersensitive Patients at University of Gondar Comprehensive Specialized Referral Hospital. *Clinical Epidemiology and Global Health* 13. 100951.
- Laurensia, L., Destra, E., Saint, H, O., Syihab, M. A. Q., & Ernawati, E. (2022). Program Intervensi Pencegahan Peningkatan Kasus Hipertensi di Wilayah Kerja Puskesmas Sidang Jaya. E-mal: *Jurnal Pengabdian Kepada Masyarakat*, 2(2), 1227-1232.
- Notoatmodjo, S. (2015). *Metodologi penelitian kesehatan*. Jakarta: Rineka Cipta .
- Profil Kesehatan Aceh. (2021). *Profil Kesehatan Aceh 2021*. Dinas Kesehatan Provinsi Aceh. https://dinkes.acehprov.go.id/content/uploads/profile_dinkes_2021_Rev.pdf
- Rita, S., & Janu. (2022). Pengaruh konsumsi air kelapa muda terhadap penurunan tekanan darah pada pasien hipertensi. *Jurnal Keperawatan Medikal Bedah*,7(1), 23 – 30 .
- Sari, R., & Purwono, J. (2022). Pengaruh Air Kelapa Muda Terhadap Penurunan Tekanan Darah Pada Pasien Hipertensi. *Jurnal Wacana Kesehatan*, 7 (1), 47-54.
- Sudaya, I. Pitu, et al. (2020). Deteksi Dini Faktor Resiko Penyakit Tidak Menular pada Masyarakat Desa Andepali Kecamatan Sampara Kabupaten Konawe. *Journal of Community Engagement in Health* 3.1. 66.
- WHO. (2023). *Monitoring Health For the Sustainable Development Goals (SDGs)*. World Health Organization.