The Effectiveness of The Use of Antihyperuricemia Against Decrease In Uric Acid Levels In Hypertensive Patients With Gout at Puskesmas X Rembang Regency

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Abstract.
This study aims to evaluate the effectiveness of the use of antihyperuricemic drugs in reducing uric acid levels in hypertensive patients who also suffer from gout at Community Health Center 1 Rembang. This type of research is a quantitative study with a cross-sectional design, using secondary data from medical records from 2024–2025. In this study, there were 91 respondents who met the inclusion criteria. The dominant characteristic of the respondents was men aged 51–65 years with an educational background ranging from elementary to junior high school. The most commonly used antihypertensive drug was amlodipine (85.7%). Before undergoing therapy, all patients (100%) showed abnormal blood pressure levels. After antihypertensive therapy, 45 patients (49.5%) had normal blood pressure, while 46 patients (50.5%) were in the abnormal category with amlodipine in 78 patients (85.7%) and captopril in 11 patients (12.1%), while the most common antihyperuricemic drug was allopurinol (87.9%). Before undergoing therapy, all patients (100%) showed abnormal uric acid levels. After antihyperuricemic therapy, 23 patients (25.3%) managed to achieve normal uric acid levels, while 68 patients (74.7%) remained in the abnormal category. Bivariate analysis showed that the average uric acid level before therapy was 8.9 mg/dL, which decreased to 7.3 mg/dL after therapy, with an average decrease reaching 1.6 mg/dL. Paired t-test indicated a p value = 0.000 ($p < 0.05$), indicating a significant difference between the conditions before and after therapy. In conclusion, the application of antihyperuricemia has been proven effective in reducing uric acid levels in patients with hypertension who also have gout at Community Health Center 1 Rembang.

Keywords: *Antihyperuricemia, Antihypertensive, Gout, Effectiveness, Community Health Center*

I. INTRODUCTION

Taste is a systemic disease of a metabolic nature, characterized by the accumulation of monosodium urin crystals (MSUs) in the tissues, especially in the joints and the area around the joints. The formation of these crystals is caused by an increase in uric acid levels in serum (serum *uric acid* or SUA) that exceed the normal limit. Solubility limits that are physiological. Although hyperuricemia is a major factor in the development of *taste,* Not everyone with high uric acid levels will have an attack *Taste*. Research shows that only about 5% of people with severe hyperuricemia (serum uric acid levels ≥ 9 mg/dL) are at risk of developing *taste.* This suggests that there are other factors at play, including genetic factors, that affect a person's susceptibility to *Taste* (Chrysanthemum) *et al*., 2024).

The rate of hyperuricemia in Indonesia continues to increase every year, in accordance with lifestyle and dietary changes that occur in the community. According to Riskesdas data in 2018, around 11.9% of adults experience gout, making it one of the serious metabolic health problems. Gout in people with hypertension needs to be watched out for because the combination of these two conditions not only makes the disease more difficult to overcome, but also increases the risk of complications that can occur in the long term. Research proves that people who suffer from hypertension and also gout have a higher risk of developing ischemic heart disease and chronic kidney failure than people who only suffer from hypertension without gout (Irmawati et al., 2023). This statement suggests that hyperuricemia and gout are not just metabolic problems, but also have a direct impact on heart health and kidney function.

Data from Basic Health Research (Riskesdas) in 2018, it was reported that the prevalence rate of gout reached around 11.9%. In the Java area, the prevalence of gout ranges from 2.6% to 47.2%. *Gout arthritis* is a condition of arthritis caused by the accumulation of uric acid crystals in the body. Resulting in patients feeling intense pain and limited ability to do physical activity. so that it can affect the quality of life of sufferers. If *Taste* arthritis does not receive attention, it is feared that the patient's quality of life will

decline in the future. *taste*, Arthritis symptoms are decreasing. A decline in the standard of living of patients who suffer from *Taste*. Arthritis can affect many aspects. One of them is the health of the body. Psychological aspects and social interactions. Therefore, to deal with these problems, self-supervision is needed. Maintenance management or *Self-care* effective for patients with *Arthritis Taste* (Victoria) *et al*., 2024). Based on data from Basic Health Research (Riskesdas) in 2018, the prevalence of hyperuricemia disease in Central Java Province reached 6.78%. This figure shows that the population in Central Java experiences an increase in uric acid levels above normal limits, which has the potential to cause complications such as gout and impaired kidney function if not treated properly (Zukhri & Permatasari, 2022).

According to Health Office, (2023) Blood pressure measurement is one of the early detection activities of NCD risk factors such as Hypertension, Stroke, Heart, Kidney Dysfunction or others. This activity can be carried out in every health facility including health centers or other health clinics as well as at PTM Posbindu in the community. Hypertension is related to behavior and lifestyle. Hypertension control is carried out by changing behavior, including avoiding cigarette smoke, eating a healthy diet, being diligent in physical activity and not consuming alcohol. The estimated number of hypertension patients aged > 15 years in 2023 is 232,914 people or 26.8 percent of the entire population aged > 15 years. The estimated number of 219,174 people or 94.1 percent have received health services.

Pharmacological treatment using antihyperuricemia drugs, especially allopurinol and febuxostat, has been one of the key components in the management of hyperuricemia for many years. Both drugs have been shown to be effective in lowering uric acid levels in serum to reach treatment targets and reduce the frequency of attacks *Taste* that relapse. In addition, a number of studies show that the use of antihyperuricemia is not only aimed at managing symptoms *Taste*, but also provides additional benefits in protecting kidney function, especially in hypertensive patients who have high uric acid levels (Chrysanthemum) *et al.*, 2024).

The study explained that the effectiveness of the use of antihyperuricemia in hypertensive patients suffering from *gout* in primary health care facilities is still relatively small, including at Puskesmas X in Rembang Regency. This situation illustrates the differences in knowledge that need to be overcome by conducting research at the local level. Therefore, this study is crucial to assess the extent to which antihyperuricemia therapy is effective in reducing uric acid levels, as well as its role in improving the management of hypertensive patients with *gout* in regional health facilities**.**

This research is expected to provide real results in efforts to improve the quality of health services at health centers, especially in the treatment of hypertensive patients with gout. Through this study, scientific evidence was obtained regarding the effectiveness of antihyperuricemia therapy in reducing uric acid levels, so that it can be used as a reference in clinical practice, decision-making for therapy, and the development of more rational and efficient policies at the primary service level or health centers.

II. METHODS

This study is an observational analytical research using a *cross sectional*, data collection was carried out retrospectively and the results of the study were in the form of an overview by collecting data on medical records of patients with the diagnosis of hyperuricemia with hypertension and *taste.* This research will be conducted at Puskesmas X in Rembang Regency. Population This study with all data on patients diagnosed with Gout at Puskesmas X Rembang Regency in 2024 - 2025 (Hadad, 2024).

The results of the calculation were rounded to 91 respondents. Therefore, the total sample used in this study will consist of 91 respondents who will represent a population of 1,000 people. The figure is considered representative enough to reflect the overall population, so it is hoped that the results of the study can reflect the condition of the population with a level of error that is still within statistically acceptable limits. The data collection time approach in this study uses *a cross sectional* design. Data collection in this study used secondary data taken from the medical records of hypertensive patients who suffered from gout and received antihyperuricemia therapy at the Health Center. In addition, the results of laboratory analysis on uric acid levels before and after the application of antihyperuricemia therapy are also used as the main

indicator in evaluating the effectiveness of treatment. All data collected are then recorded into a Data Collection Sheet (LPD) that has been prepared by the researcher. After the data collection is complete, the next step is to verify and classify it to ensure compatibility with the research variables. Furthermore, data were analyzed descriptively to identify patient characteristics, as well as inferentially to evaluate the relationship between antihyperuricemia use and decreased uric acid levels in hypertensive patients suffering from gout.

Normality tests were carried out to determine whether the data on uric acid levels before and after the administration of antihyperuricemia drugs were distributed normally. Since the sample size was about 1,000 respondents, the test used the Kolmogorov-Smirnov (K-S) test with the help of SPSS. The data is declared to be normally distributed if the significance value (p-value) > 0.05, while the ≤ value of 0.05 indicates that the data is not normally distributed. Given that large sample sizes can affect the results of the K-S test, interpretation is also supported by histograms, normal Q-Q plots, and skewness and kurtosis values. The results of the normality test are the basis for the selection of statistical tests, namely the paired sample t-test for normally distributed data and the Wilcoxon test for non-normally distributed data.

III. RESULT AND DISCUSSION

Respondent Characteristics

1. Age, Gender and Education

Table 1. Frequency Distribution of Respondent Characteristics of Age, Sex, and Education of Comorbid Gout Hypertension Patients at Puskesmas X Rembang Regency (N: 91)

Variable	Frequency	%
Age		
30-45 years old	35	38,5
46-50 years old	15	16,5
51-65 years old	39	42,9
>65 years old	2	2,2
Gender		
Male	48	52,7
Women	43	47,3
Education		
Elementary School	52	57,1
High School	33	36,3
COLLEGE	6	6,6
Total	91	100,0

Based on table 1, it can be seen that the frequency distribution of respondent characteristics shows that out of a total of 91 respondents, the largest age group is 51-65 years old, which is 39 people (42.9%), followed by 35 people (38.5%) at 30-45 years old, 15 people (16.5%) at 46-50 years old, and at least 2 people >65 years old (2.2%), Based on gender, there were more male respondents, namely 48 people (52.7%) than women, as many as 43 people (47.3%), Based on education level, the majority of respondents had an elementary-junior high school education, namely 52 people (57.1%), then high school as many as 33 people (36.3%), and universities as many as 6 people (6.6%), In general, the respondents in this study were dominated by the age group of 51–65 years, male, and with primary to junior secondary education

Long suffering from hypertension needs to be shown as a clinical characteristic of the respondent because the duration of hypertension can be related to the degree of damage to blood vessels, kidney function, and uric acid excretion ability. The longer the patient has hypertension, the more likely it is that kidney microvascular disorders can worsen hyperuricemia. Therefore, the long-term data of hypertension sufferers in this study were recorded from medical records and categorized into <1 year, 1–5 years, and >5 years to clarify the clinical profile of the respondents.

Bivariate analysis

A. Results of Analysis of the effectiveness of antihyperuricemia before and after the type and dose of drugs with a reduced rate of uric acid levels in hypertensive patients with gout

Table 2. Results of Analysis of the Effectiveness of Antihyperuricemia Before and After Giving Types and Doses of Drugs with a Reduced Rate of Uric Acid in Hypertensive Patients with Gout

Gout	Mean (mg/dl)	SD	N	*P Value*
Before	8,9	0,432		
After	7,3	0,559	91	0,000
Decline	1,6	0,365		

Based on table 4. 7 above, it is known that the average uric acid level of patients before being given antihyperuricemia is 8.9 mg/dL with a standard deviation of 0.432, while the average uric acid level after being given antihyperuricemia decreases to 7.3 mg/dL with a standard deviation of 0.559, The average decrease in uric acid levels in patients is 1.6 mg/dL with a standard deviation of 0.365, in the number of respondents as many as 91 patients, The results of the statistical test showed a p value = 0.000 so that p < 0.05, then it can be concluded that there is a significant difference between uric acid levels before and after antihyperuricemia is given, This shows that the administration of antihyperuricemia is effective in reducing uric acid levels in hypertensive patients with gout,

B. Results of Analysis of the effectiveness of antihypertensive drugs before and after being given types and doses of drugs with a reduced level of blood pressure in hypertensive patients with gout

Table 2. Results of Analysis of Antihypertensive Effectiveness Before and After Being Given Type and Dose of Drugs with a Reduced Rate of Blood Pressure in Hypertensive Patients with Gout

Blood pressure	SISTOL		DIASTOL		N
	Mean (mmHg)	SD	Red	SD	
Before	155,46	10,453	91,32	3,714	
After	134,07	7,300	82,05	5,292	91
Decline	21,40	8,077	9,26	5,006	
P Value	0,000		0,000		

Based on table 8 above, know that the average systolic blood pressure before being given antihypertensive is 155.46 mmHg with a standard deviation of 10.453, while the average systolic blood pressure after being given antihypertensive decreases to 134.07 mmHg with a standard deviation of 7.300, The average decrease in systolic blood pressure is 21.40 mmHg with a standard deviation of 8.077, In diastolic blood pressure, the average before being given antihypertensive is 91.32 mmHg with a standard deviation of 3.714, while the average after being given antihypertensive decreased to 82.05 mmHg with a standard deviation of 5.292, The average decrease in diastolic blood pressure was 9.26 mmHg with a standard deviation of 5.006, The number of respondents in this study was 91 patients, The results of the statistical test showed that the p value of systol = 0.000 and the p value of diastol = 0.000, so that p < 0.05, Thus, it can be concluded that there is a significant difference between blood pressure before and after administration Antihypertensive Therapy, This shows that the administration of antihypertensive drugs is effective in lowering systolic blood pressure and diastole in hypertensive patients with gout.

IV. DISCUSSION

1. Results of Antihyperuricemia Effectiveness Analysis before and after being given the type and dose of drugs with a reduced level of uric acid in hypertensive patients with gout.

The results of the study found that the average uric acid level of patients before being given antihyperuricemia was 8.9 mg/dL with a standard deviation of 0.432, while the average uric acid level after being given antihyperuricemia decreased to 7.3 mg/dL with a standard deviation of 0.559, The average decrease in uric acid levels in patients was 1.6 mg/dL with a standard deviation of 0.365, in the number of respondents as many as 91 patients, The results of the statistical test showed that the p value = 0.000 so that p < 0.05, then it can be concluded that there is a significant difference between uric acid levels before and after antihyperuricemia is given, This shows that the administration of antihyperuricemia is effective in reducing uric acid levels in hypertensive patients with gout (FitzGerald et al, 2020).

The results of this study show that the administration of antihyperuricemia is effective in reducing uric acid levels in hypertensive patients with gout, characterized by a decrease in the average uric acid level from 8.9 mg/dL to 7.3 mg/dL, with an average decrease of 1.6 mg/dL, Clinically, these results show that the therapy given has been able to improve hyperuricemia, although the average uric acid level after therapy is still above the general target of gout therapy. that is <6 mg/dL in most patients, so further optimization of therapy is still needed (FitzGerald et al, 2020).

Antihyperuricemia therapy in gout aims to reduce serum uric acid levels to the target through a treat-to-target approach, the 2020 American College of Rheumatology Guidelines recommend allopurinol as a first-line therapy for almost all gout patients who require urate-lowering therapy, including patients with certain comorbidities, with the principle of starting low doses and then titrated until the target uric acid level is reached, The 2024 guidelines of the Indonesian Rheumatology Association also emphasize that the control of hyperuricemia must be carried out gradually with periodic evaluation because the achievement of the target of serum veins does not always occur quickly, especially if the initial level is high or the patient has metabolic comorbidities (Rheumatology, 2024).

If it is associated with drug distribution in the previous study, the most widely used antihyperuricemia is allopurinol, while a small percentage of patients get febuxostat, the use of allopurinol in this study is in accordance with the theory because allopurinol is an inhibitor of the xanthine oxidase enzyme that decreases the formation of uric acid and remains the main choice in clinical practice, Meanwhile, febuxostat also works as a xanthine oxidase inhibitor and is known to be able to Effectively lowering uric acid levels, even in some studies showing a higher proportion of achieving the target serum of urin than allopurinol at a dose of 200–300 mg/day, especially at a dose of 80 mg/day, (Xie et al, 2023).

A 2023 meta-analysis reported that febuxostat 80 mg/day resulted in a percentage of patients who achieved a uric acid level of ≤6 mg/dL of 72.2%, while in the allopurinol group of 200–300 mg/day it was 40.4%, The results showed that pharmacologically febuxostat can provide a stronger reduction in uric acid levels in some patients, However, allopurinol remains more widely used in daily practice due to its status as a first-line therapy, wider use experience, and its compatibility with current gout management guidelines, (Xie et al, 2023).

The researchers indicated that the effectiveness of antihyperuricemia in this study was most likely influenced by the dominance of allopurinol use in most respondents, The average decrease of 1.6 mg/dL indicates that the drug has provided a good biological response, but the final level of 7.3 mg/dL indicates that some patients may not have reached the optimal dose, have not undergone therapy for a long time. lack of adherence to medication, or still have hyperuricemia triggers such as a diet high in purines, impaired kidney function, and other metabolic comorbidities, Thus, the results of this study can be interpreted that antihyperuricemia therapy is effective, but the achievement of clinical targets still requires dose titration and continuous monitoring (Rheumatology, 2024).

This study is in line with previous research in 2023 showing that in gout patients who received allopurinol 300 mg monotherapy, only about 42% of patients achieved the serum urin target at 6 months of therapy, The study concluded that although allopurinol is effective in lowering uric acid levels, many patients still require dose titration, follow-up therapy, or more intensive treatment strategies in order for serum urin targets to be achieved, (Hotea et al., 2023).

This study proves that the administration of antihyperuricemia is effective in lowering uric acid levels in hypertensive patients with gout, The effectiveness is very likely to be influenced by the use of allopurinol as the main drug, while febuxostat has the potential to be used in certain patients who need a greater reduction in uric acid levels or who do not reach the target with allopurinol, However, because the average uric acid level after therapy is still above the target, Therefore, therapy needs to continue to be optimized through dose adjustments, uric acid level monitoring, and patient compliance education,

2. Results of Antihypertensive Effectiveness Analysis Before and After Being Given Type and Dose of Drugs with Blood Pressure Reduction in Hypertensive Patients with Gou

The study found that the average systolic blood pressure before being given antihypertensive was 155.46 mmHg with a standard deviation of 10.453, while the average systolic blood pressure after being

given antihypertensive decreased to 134.07 mmHg with a standard deviation of 7.300, The average decrease in systolic blood pressure was 21.40 mmHg with a standard deviation of 8.077, In diastolic blood pressure, the average before being given antihypertensive was 91.32 mmHg with a standard deviation of 3.714, while the average after being given antihypertensive decreased to 82.05 mmHg with a standard deviation of 5.292, The average decrease in diastolic blood pressure was 9.26 mmHg with a standard deviation of 5.006, The number of respondents in this study was 91 patients, The results of the statistical test showed that the p value of systol = 0.000 and the p value of diastol = 0.000, so that $p < 0.05$, Thus, it can be concluded that there is a significant difference between blood pressure before and after administration antihypertensive drugs, This shows that the administration of antihypertensives is effective in lowering systolic and diastolic blood pressure in hypertensive patients with gout (Kreutz et al, 2024).

This study shows that the antihypertensive given is effective in lowering blood pressure in hypertensive patients with gout, This can be seen from the average decrease in systolic blood pressure by 21.40 mmHg and diastolic blood pressure by 9.26 mmHg, as well as the results of statistical tests that show significant differences before and after therapy, Clinically, this decrease is important because it shows that the therapy given is able to improve the patient's hemodynamic control and reduce the risk cardiovascular complications associated with uncontrolled hypertension (Kreutz et al, 2024).

Antihypertensive therapy aims to lower blood pressure to the recommended target through the use of effective, safe, and appropriate drugs according to the patient's characteristics, The European Hypertension Guidelines of 2024 place several classes of drugs, including calcium channel blockers and ACE inhibitors, as an important part of the management of hypertension, In patients with comorbid gout, the selection of antihypertensive drugs is becoming increasingly important because several classes of antihypertensive drugs can affect uric acid metabolism, In this context, amlodipine is often a favorable option because it is effective in lowering blood pressure and is not known as a drug that increases uric acid like certain diuretics, (McEvoy et al., 2024).

Patients with gout comorbid hypertension, the selection of antihypertensive drugs cannot be separated from its effect on gout. Amlodipine as a calcium channel blocker tends to be neutral to uric acid levels and remains effective in lowering blood pressure, so its use in this study can be seen as rational. Captopril as an ACE inhibitor also lowers blood pressure through inhibition of the formation of angiotensin II, but does not specifically function as a uric acid lowerer. A drug that needs to be more watched out for in gout patients is the diuretic thiazide because it can increase the reabsorption of veins in the kidneys and aggravate hyperuricemia. Thus, the combination of antihypertensive considerations and uric acid levels becomes an important part of the therapy of hypertensive patients with gout.

In line with the results of previous research, the most widely used antihypertensive drug distribution is amlodipine, while a small percentage of patients use captopril, Amlodipine is a group of dihydropyridine calcium channel blockers that work by inhibiting the entry of calcium ions into the smooth muscles of blood vessels, thereby causing peripheral vasodilation and a decrease in systemic vascular resistance, This drug is widely used because it has a long duration of action, Simply taken once a day, effective in essential hypertension, and providing 24-hour blood pressure control, Wang et al's 2023 review confirms that amlodipine has been shown to lower blood pressure, reduce blood pressure variability, and maintain stable blood pressure control (Wang et al, 2023).

Meanwhile, captopril is a group of ACE inhibitors that work to inhibit the conversion of angiotensin I to angiotensin II, thereby reducing vasoconstriction and aldosterone secretion, Captopril is also effective in lowering blood pressure, but because of its shorter half-life, its use often requires more frequent administration than amlodipine, This can affect patient adherence to long-term use in primary care, Some recent studies have shown that both captopril and amlodipine are equally effective in lowering blood pressure, but amlodipine tends to be more practical and in some studies provides better diastolic control (Agustina & others, 2024).

Studies have shown that both captopril 25 mg and amlodipine 5 mg are equally effective in lowering systolic and diastolic blood pressure, but amlodipine 5 mg shows a greater reduction in diastolic blood

pressure than captopril 25 mg, The study concluded that both drugs are effective, but amlodipine may be a better option when more stable blood pressure control is needed (Amal & others, 2025).

A multicenter observational study also showed that amlodipine therapy 5/10 mg per day as monotherapy or adjunct therapy provided a significant reduction in office blood pressure and ambulatory blood pressure for 8 weeks, The study concluded that amlodipine was effective in lowering blood pressure for 24 hours in patients with mild to moderate hypertension, so the dominant use of amlodipine in this study was very likely to be the main factor in the occurrence a significant decrease in the average systolic and diastole, (Prabhakar et al, 2023).

The researcher showed that the effectiveness of antihypertensive in this study was very likely influenced by the dominance of amlodipine use in most patients, with a small percentage of patients using captopril, A decrease in systolic by 21.40 mmHg and diastole by 9.26 mmHg showed a good therapeutic response, In addition, the selection of amlodipine in hypertensive patients with gout was also quite rational because this drug was effective in controlling blood pressure and in previous literature it was associated with with a more favorable profile on the risk of gout than some other antihypertensives, blood pressure after therapy has decreased significantly, the average systole of 134.07 mmHg and diastol of 82.05 mmHg indicates that some patients may still not be at fully optimal blood pressure control, This can be caused by several factors, such as a fairly high degree of early hypertension, adherence to medication, excessive salt consumption, obesity, stress, lack of physical activity, pain due to gout, as well as the presence of other comorbidities that affect blood pressure stability, Therefore, the success of antihypertensive therapy is determined not only by the type of drug, but also by the continuity of treatment and lifestyle changes (Prabhakar et al, 2023).

This study proves that the administration of antihypertensive drugs is effective in lowering systolic and diastolic blood pressure in hypertensive patients with gout, The effectiveness is very likely related to the dominance of the use of amlodipine as the main antihypertensive, accompanied by the use of captopril in a small percentage of patients, Both drugs are equally effective, but amlodipine appears to be more suitable in the study population because it is practical, stable, and relevant for hypertensive patients with gout comorbidities, However, therapeutic optimization and lifestyle modification are still needed for the target (Prabhakar et al, 2023).

Thus, the discussion of blood pressure in patients with gout comorbid hypertension is not enough to show a decrease in blood pressure, but also needs to explain that blood pressure control is related to the risk of hyperuricemia through renal and vascular mechanisms. A better reduction in blood pressure is expected to help maintain kidney perfusion, reduce the risk of damage to target organs, and support more optimal management of uric acid levels.

V. CONCLUSION

The characteristics of gout comorbid hypertension patients at Puskesmas X Rembang Regency are mostly men aged 51–65 years with elementary-junior high school education, The pattern of drug use is dominated by amlodipine (85.7%) as an antihypertensive, allopurinol (87.9%) as an antihyperuricemia, and antalgin as the most commonly administered comorbid drug, Before the administration of antihyperuricemia, all patients (100%) had abnormal uric acid levels, After therapy, Some 23 patients (25.3%) have achieved normal uric acid levels, while 68 patients (74.7%) remain in the abnormal category. Before the administration of antihypertensives, all patients (100%) had abnormal blood pressure, After therapy, some 45 patients (49.5%) achieved normal blood pressure, while 46 patients (50.5%) were still uncontrolled. The administration of antihyperuricemia was proven to be effective in significantly reducing uric acid levels, with an average decrease of 1.6 mg/dL and a p value = 0.000, The administration of antihypertensive was also proven to be effective in significantly lowering systolic and diastolic blood pressure, with an average decrease in systole of 21.40 mmHg, diastole 9.26 mmHg, and p value = 0.000.

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