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The Effect Of Cupping On Blood Pressure In Hypertension

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Keywords:Cupping
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Pressure blood tall Becomes a problem only when blood pressure is persistent because it makes system circulation and organs that receive blood supply (including heart and brain) tense. one therapy trusted cupping can lower blood pressure. The research objectives are to analyze the effectiveness of cupping to change pressure blood sufferer hypertension. Study this use method study quantitative with type study pre-experimental design. In a study, this is a total of 30 sufferers Coming hypertension went to the clinic house Nur syifa therapy and did not use the drug hypertension. Respondent gets action measurement pressure blood before conducting action cupping. Respondent gets therapy cupping not enough for 3-5 minutes, then measured repeat pressure of the blood after action cupping. Data analysis using the Wilcoxon test. Results show that cupping is effective for lower pressure blood (p-value <0.001), and pressure blood experienced a decrease in average post cupping 1.45 points with effect size in the category large (1.0). Therapy cupping is capable lower blood pressure. Future research could compile therapy with other therapies to reduce antihypertensive drugs that cause resistance or affect medicine.

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INTRODUCTION

Hypertension is one disease the most common and most common cardiovascular carried society. Hypertension is the enhancement pressure blood systolic more than 140 mmHg and pressure blood diastolic more than 90 mmHg in twice measurements with hose five minutes in state enough rest or in state calm down. Hypertension is the most common disease found in developed countries nor developing countries, one of which is Indonesia, and including two in group disease reason death. Danger disease hypertension is very diverse, and if no quick handled so will cause complications and disturbing other organ functions (Annisa et al., 2021).

According to the World Health Organization (WHO), an estimated 1.28 billion adults aged 30-79 years worldwide suffer from hypertension, and most (two-thirds) live in low- and middle-income countries. An estimated 46% of adults with hypertension are unaware of the condition. Less than

half of adults (42%) with hypertension are diagnosed and treated. About 1 in 5 adults (21%) with hypertension can control it (World Health Organization, 2021).

The results of Riskesdas (2018) show that the prevalence rate of hypertension based on national measurements of the Indonesian population aged >18 years is 34.11%, the highest is in South Kalimantan (44.1%), and the lowest is in Papua (22.2%). Hypertension occurs in the age group of 31-44 years (31.6%), age 45-54 years (45.3%), and age 55-64 years (55.2%). The estimated number of hypertension cases in Indonesia is 63,309,620 people, while the death rate in Indonesia due to hypertension is 427,218 (Health Research and Development Agency, 2021). From a preliminary study's results, data from the Fakfak District Health Office in 2020 amounted to 1,122 people with hypertension (Fakfak District Health Office, 2020).

High blood pressure becomes a problem only when it is persistent because it makes the circulatory system and organs that receive blood supply (including the heart and brain) tense. The dangers of hypertension are very diverse. A person with hypertension will also experience complications with other diseases. Death happens because disrupting one organ of the human body will cause interference in other organs. If one organ is sick, the other organs will also be affected. Hypertension includes kidney failure, impaired brain performance, impaired heart performance, causing eye damage, causing vascular resistance, and stroke (Sardaniah et al., 2020).

Seeing the complexity of the hypertension problem and the obstacles to pharmacological treatment of hypertension due to the decreasing purchasing power of the community and having a high price (I MADE RAKA & ALVA CHERRY MUSTAMU, 2022), that anticipation of these problems needs to be given breakthroughs to the community non-pharmacological treatment (cupping therapy) can be a good choice, both in terms of economy and benefits. Cupping, through nitric oxide (NO), plays a role in increasing the supply of nutrients and blood needed by cells and layers of arteries and veins, making them stronger and more elastic and reducing blood pressure; nitric oxide (NO) substances also play a role in vasodilation (the process of expanding blood vessels) causing a decrease in blood pressure (Lestari et al., 2017; Luthfiyah et al., 2022).

Given the pharmacological therapy, the high incidence of drug side effects, and the relatively high price, non-pharmacological treatment is the right choice. One of them is cupping therapy which is believed to lower blood pressure. Thus, the public can minimize the use of pharmacological hypertension drugs, which are quite expensive. The purpose of this study was to analyze the effectiveness of cupping on changes in blood pressure in patients with hypertension.

RESEARCH METHOD

Study this use method study quantitative with type study pre-experimental design. One group design This pretest and posttest design is done to one group without existence control group or comparison. A study sample is a total of 30 sufferers Coming hypertension _ to the clinic house Nur syifa therapy and not using drug hypertension and ready to undergo the research process until finished. Determination sample using a purposive sampling technique. Participants who consumed the antihypertensive drug 10-30 minutes before conducting the intervention did not follow in this study. The procedure study started with Respondents who came to the clinic house Nur Syfa's therapy rest more to stabilize their blood pressure after activity. Respondent gets action measurement pressure blood before conducting action cupping. Respondent gets therapy cupping not enough for 3-5 minutes, then measured repeat blood pressure after action cupping—data analysis using the Wilcoxon test.

RESULTS AND DISCUSSIONS

RESULT

A total of 30 respondents contribute to the study. The average age of respondents is 51.9 years. Most respondents have educated undergraduates and work as a civil servant. Most respondent experience hypertension degree 1. The data are presented in table 1.

Table 1. Characteristics respondent

Variable	n	%
Age (Mean, SD) (years)	51.9 (9.84)	
Education		
Elementary School	7	24.1 %
Junior High School	7	24.1 %
Senior High School	2	6.9 %
Undergraduate	11	37.9 %
Master	2	6.9 %
Work		
Fisherman	5	17.2 %
Civil servant	8	27.6 %
Private	5	17.2 %
Driver	2	6.9 %
IRT	5	17.2 %
Soldier / Police	1	3.4 %
Trader	3	10.3 %
Farmer	1	3.4 %
Category Blood Pressure		
Pre-Hypertension	4	13.8 %
Hypertension degree 1	18	62.1 %
Hypertension degree 2	7	24.1 %

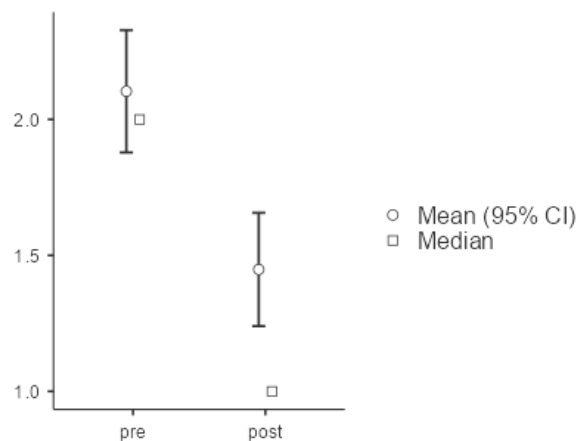


Figure 1. Changes in blood pressure after cupping

Table 2. Pressure test results blood post intervention cupping

	N	mean	SD	SE	p	Effect Size
Pre	29	2.10	0.618	0.115	< .001	1.00
Post	29	1.45	0.572	0.106		

Table 2 above shows that cupping effectively lowers blood pressure (p-value <0.001). Blood pressure decreased on average after cupping as much as 1.45 points with effect size in the large category (1.00). Changes in blood pressure after cupping can be seen in figure 1.

Discussion

Hypertension does not occur suddenly but through a long process. High blood pressure that cannot be controlled for a certain period and cause high blood pressure to become permanent is called hypertension. Hypertension can be caused by obesity (overweight), foods high in salt, stress, alcoholic beverages, coffee, genetic factors, and age or can be caused by other diseases such as kidney, heart, hormonal disorders, or the effects of drug use. (Kartika et al., 2021)

Hypertension can be prevented through pharmacological and non-pharmacological treatment. The pharmacological treatment uses antihypertensive drugs such as diuretics, adrenergic blockers, and calcium channel blockers (Pratiwi, 2017). At the same time, non-pharmacological treatment can be done by modifying lifestyle, such as following the recommended diet, reducing salt consumption, adequate exercise, not smoking, not drinking alcohol, adjusting diet, or undergoing complementary therapy (Iqbal & Handayani, 2022).

Complementary therapy that is currently popular and trusted by the public to treat hypertension is cupping therapy. Cupping therapy is one of the complementary therapies that serves to reduce high blood pressure in hypertensive patients. Cupping, which has been used in the community for thousands of years, is also often used to treat hypertension (Sardaniah et al., 2020).

In particular, cupping at the right point can lower blood pressure immediately. The effects of cupping therapy on hypertension include the following: cupping plays a role in calming the sympathetic nervous system. This agitation in the sympathetic nervous system stimulates the secretion of enzymes that act as the angiotensin-renin system. Once this system is calm and its activity is reduced, blood pressure will drop. Cupping plays a role in reducing the volume of blood flowing in the blood vessels, thereby reducing blood pressure (Alfiyansah, 2018; Momot et al., 2022).

Cupping affects hypertension by improving blood vessel microcirculation and providing a vasodilating effect so that blood pressure drops stably and calms the sympathetic nervous system. This effect on the sympathetic nervous system stimulates the secretion of enzymes that act as the renin-angiotensin system. After the system is calm and its activity is reduced, the blood pressure will drop (Safrianda, 2015).

Cupping adheres to the theory of balance (homeostasis) in its mechanism of action against hypertension. This theory explains that the human body is always in balance. If one element is not balanced, it will cause disease, so cupping will naturally help the body create balance. The part that plays an important role in body balance is the meridian line which includes the musculoskeletal system with the flow of nerves, lymph and blood vessels (Mustamu, Sjarfan et al., 2020; Nur, 2018).

This system connects the body's surface with organs, organs with organs, organs with supporting tissues, supporting tissues with one another, the lower part of the body outside and inside, and organs with the limbs. The existence of this relationship will form a unity that is interconnected and reacts together when getting stimulation from inside and outside the body. Through these meridians, vital energy flows mixed with blood balance the body's functions (Candrawati & Ni Komang Sukraandini, 2021; Mustamu, Mustamu et al., 2020).

If you do cupping at one point, the skin (cutis), subcutaneous tissue (subcutis), fascia and muscles will be damaged from mast cells/basophils and others. As a result of this damage, several substances, such as serotonin, histamine, bradykinin, and slow-reacting substance (SRS), will be released, as well as other unknown substances. These substances cause dilation (expansion) of capillaries and arterioles and flare reactions in the cupped area. Capillary dilatation can also occur in places far from the place of cupping. This causes an improvement in the microcirculation of the blood vessels. As a result, there is relaxation of stiff muscles, and due to general vasodilation, it will lower blood pressure stably (MUSTAMU, 2015; Suryanda et al., 2017).

Cupping controls the pressure of the aldosterone hormone so that it controls blood pressure. Cupping plays a role in stimulating special receptors associated with constriction and stretching of blood vessels (baroreceptors) so that blood vessels can respond to various stimuli and increase their sensitivity to factors that cause hypertension. Cupping stimulates cardiovascular regulators, especially in peripheral resistance (peripheral resistance), through the effects that occur due to cupping (Ahmad et al., 2020; MUSTAMU, 2015).

The effect of cupping on hypertension plays a role in calming the sympathetic nervous system. This agitation in the sympathetic nervous system stimulates the secretion of enzymes that act as the renin-angiotensin system. Once the system is calm and its activity is reduced, blood pressure will drop; Cupping also controls levels of the hormone aldosterone; Nitric oxide (NO), which plays a role in vasodilation, through this nitric oxide substance also plays a role in increasing the supply of nutrients and blood needed by cells and layers of arteries and veins, so that blood vessels become stronger and more elastic. Moreover, cupping plays a role in stimulating receptors (baroreceptors) so that blood vessels can respond to stimuli and increase their sensitivity to factors that cause hypertension.

CONCLUSION

The results of this study indicate that cupping therapy can reduce blood pressure. Future research can compile this therapy with other therapies to reduce the use of antihypertensive drugs resulting in drug resistance or failure.

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