

The Effectiveness Of Wet Cupping And Dry Cupping In Reducing Blood Pressure In Hypertension Patients

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Abstract

Hypertension is the 5th deadliest disease in the world at various ages. Management of hypertension can be done with a pharmacological, non-pharmacological, or alternative treatments that can treat hypertension is cupping therapy. The purpose of study was to find out the differences in the effect of wet cupping therapy and dry cupping therapy on the back point to decrease blood pressure in hypertension patients in Wonopringgo Village, Pekalongan Regency. This research used a type of pre-experimental design with a pre-post-test design. There are 2 groups (two groups) on this research without a control group. The result of Mann Whitney Test obtained p-value 0,000 <0,05 which mean there is a difference in blood pressure reduction between wet cupping therapy with dry cupping therapy, this is because wet cupping has an effect on blood pressure in hypertension patients, one of which is reducing the volume of blood in the body by removing some of the blood, while dry cupping has a relaxing effect on the heart, kidneys, back veins, such relaxation effect will occur vasodilatation of blood vessels that have previously undergone vasoconstriction resulting in a decrease in blood pressure in patients with hypertension. The conclusion of this study is that wet cupping therapy with dry cupping therapy can reduce blood pressure in patients with hypertension.

Key word : Hypertension, Blood Pressure, Wet Cupping, Dry Cupping, Alternative Medicine

many as 29% of adults worldwide are affected by

Introduction

WHO (2015) data shows that around 1.13 billion people in the world suffer from hypertension. That is, 1 in 3 people in the world are diagnosed with hypertension and only 36.8% of them take medication. Whereas in Indonesia, based on the 2013 Riskesdas data, the prevalence of hypertension in Indonesia is 25.8%, the highest prevalence occurs in Bangka Belitung (30%) and the lowest in Papua (16.8%). Meanwhile, the 2016 National Health Indicator Survey (Sirkesnas) data showed an increase in the prevalence of hypertension in people aged 18 years and over by 32.4% (RI Ministry of Health, 2018). According to Indonesia's 2014 Sample Registration System (SRS), complications with hypertension (5.3%) were the number 5 (five) deaths at all ages. Data from the World Health Organization (WHO) in 2011 showed that one billion people in the world suffer from hypertension, 2/3 of which are in developing countries with low to moderate income. Hypertension prevalence will continue to increase sharply and is predicted in 2025 as

hypertension. Hypertension has resulted in the deaths of around 8 million people each year, of which 1.5 million deaths occur in Southeast Asia where 1/3 of the population suffers from hypertension which can cause an increase in the burden of health costs. (Indonesian Ministry of Health, 2017).

Hypertension can be defined as persistent blood pressure with systolic pressure above 140 mmHg and diastolic blood pressure above 90 mmHg (Aspiani, 2014). Management of hypertension can be done with a pharmacological, non-pharmacological, or alternative approach. Indonesian people, especially those with low economics, prefer alternative therapies because they are affordable, do not use chemicals and have significant healing effects and one alternative treatment that can treat hypertension is cupping therapy (Umar, 2008).

In a study conducted by Nouran Aleyeidi¹, Khaled Aseri² and Abeer Kawthar in 2014 entitled "The Efficacy of Wet Cupping on Blood

Pressure among Hypertension Patients in Jeddah, Saudi Arabia: A Randomized Controlled Trial Pilot Study" found that differences in systolic values in groups intervention before and after cupping therapy was 1.8 while the difference in diastolic value was 0.0. While the difference in systolic values in the control group before and after cupping therapy is 10.5 while the difference in diastolic values is 5.4. in this study also explained that the results after cupping therapy had no serious side effects from wet cupping.

The results of research conducted by Arturo, Brandon, Diana, Andrew in 2017 entitled "Effect of Dry Cupping Vascular Function among Young Individuals" that after 10 minutes of dry cupping treatment, individuals experienced a significant 36% increase in the Vascular Reactivity Index (VRI) from the beginning (2.60 ± 0.40 to 3.53 ± 0.42 , $p < 0.05$). Participants did not experience complications due to the intervention (Arturo, Brandon, Diana, Andrew, 2017).

Methods

This research is a pre-experimental study using pre-experimental design with a pre-post-test design. In this design there are 2 groups (two groups) without a control group by examining the characteristics of respondents, namely age, sex, occupation and blood pressure before and after wet cupping therapy with dry cupping therapy which is presented in the frequency distribution (percentage). The normality test technique used was using the Kolmogorof technique because respondents > 50. Based on the normality test, the results of the pre-test and post-cupping wet test and dry cupping therapy were obtained from 0,000, which means that the distribution was not normal. Then the transformation of the pre test and post test data using the Mann Whitney test and the results obtained 0,000 which means accepted or there are differences in the effect of wet cupping therapy with dry cupping therapy to decrease blood pressure in patients with hypertension.

Results and discussion

The results of this study outline the differences in the effect of wet cupping therapy and dry cupping therapy on the back point to decrease blood pressure in patients with hypertension.

Characteristics of Respondents' Data

Table 1. Frequency Distribution of Respondent Characteristics of Hypertension Patients by Age in Wonopringgo Village, Pekalon Regency

Age	Frequency (f)	Presentage (%)
Over 48 years old	43	82,7
Less than 48 years old	9	17,3
TOTAL	52	100,0

Based on the research the frequency distribution of respondents based on the age of hypertensive patients in Wonopringgo Village, 43 respondents (82.7%) were over 48 years old and 9 respondents (17.3%) were less than 48 years old.

Table 2 Distribution of Frequency of Characteristics of Respondents of Hypertension Patients by Gender in Wonopringgo Village, Pekalongan Regency

Gender	Frequency (f)	Presentage (%)
Male	24	46,2
Female	28	53,8
TOTAL	52	100,0

Based on the research on the frequency distribution of respondents based on the sex of hypertensive patients in Wonopringgo Village, 24 respondents (46.2%) were male and 28 respondents (53.8%) were female.

Table 3 Frequency Distribution of Respondent Characteristics of Hypertensive Patients Based on Work in Wonopringgo Village, Pekalongan Regency

Work	Frequency (f)	Presentage (%)
Enterpreneur	10	19,2
Housewife	25	48,2
Labor	14	26,9
Trader	1	1,9
Civil Servants	2	3,8
TOTAL	52	100,0

Based on the research on the frequency distribution of respondents based on the work of hypertensive patients in Wonopringgo Village, 10 respondents (19.2%) worked as entrepreneurs, 25 respondents (48.2%) worked as Housewives, 14 respondents (26.9%) worked as laborers, 1 respondents (1.9%) worked as traders and 2 respondents (3.8%) worked as civil servants.

Table 4 Differences in Blood Pressure Before and After Given Wet Cupping Therapy Against Hypertension Patients in Wonopringgo Village, Pekalongan Regency

Variable	Mean		P-value
	Before	After	
Systolic	151,92	140,38	0,000
Diastolic	91,15	85,00	
Decline			
Systolic	11,54		
Diastolic	6,15		

The results showed that the average value of the systolic blood pressure of the respondents before being given wet cupping therapy was 151.92 mmHg. The average value of systolic blood pressure after being given wet cupping therapy was 140.38 mmHg. While the average value of the diastolic blood pressure of respondents before being given wet cupping therapy was 91.15 mmHg, and the average value of diastolic blood pressure after being given wet cupping therapy was 85.00 mmHg.

The results of this study indicate that after wet cupping therapy the value of the respondent's blood pressure decreased both systolic and diastolic in Wonopringgo Village, Pekalongan Regency.

This is in accordance with Sharaf's (2012) theory which states that cupping can reduce blood pressure in several ways, namely calming sympathetic nerves so that renin-angiotensin enzyme secretion can be reduced, reducing blood volume flowing in blood vessels thereby reducing blood pressure, controlling aldosterone hormone levels, releasing nitric oxide (NO) so that vasodilation occurs in blood vessels, proportions of sodium in the blood, increasing blood supply and nutrition, can stimulate special receptors, and increase

sensitivity to the causative factors for hypertension (Sharaf, 2012).

Table 5 Differences in Blood Pressure Before and After Given Therapy of Dry Cupping Against Hypertension Patients in Wonopringgo Village, Pekalongan Regency

Variable	Mean		P-value
	Before	After	
Systolic	151,54	148,08	0,000
Diastolic	90,00	87,69	
Decline			
Systolic	3,46		
Diastolic	2,31		

The results showed that the average value of the systolic blood pressure of the respondents before being given dry cupping therapy was 151.54 mmHg. The average value of systolic blood pressure after being given dry cupping therapy was 148.08 mmHg. While the average value of the diastolic blood pressure of respondents before being given dry cupping therapy was 90.00 mmHg, and the average value of diastolic blood pressure after being given dry cupping therapy was 87.69 mmHg.

Based on the results of the study put forward by Yogie Bagus Pratama, Hanny Rasni, and Wantiyah, it was shown that dry cupping has provided significant benefits in reducing blood pressure with hypertension. Cupping causes dilatation of blood vessels, decreases heart rate and improves blood vessel elasticity, all of which have a theoretical effect on reducing blood pressure (Primary, Y.B; Rasni, H; Wantiyah, W, 2018).

Table 6 Differences in Decreasing Blood Pressure Between Wet Cupping Therapy and Dry Cupping Therapy at Back Points in Hypertensive Patients in Wonopringgo Village, Pekalongan Regency

Variable	Mean		P-value
	Wet Cupping	Dry Cupping	
Systolic	11,54	3,46	0,000
Diastolic	6,15	2,31	
Decline			
Systolic	8,08		
Diastolic	3,84		

The results of this study indicate that there is a difference in the decrease in the average blood pressure between wet cupping therapy with dry cupping therapy which is 8.08 mmHg in systolic blood pressure and 3.84 mmHg in diastolic blood pressure.

According to Purwandari, systolic blood pressure is associated with the left ventricular period, whereas diastolic blood pressure is affected by heart frequency and vascular verifer resistance. The frequency of the heart is affected by several things such as stimulation of all cutaneous nerves, receptors for pain, heat, cold, and touch, but it can also be influenced by emotional input from the central nervous system. Cupping therapy will affect the nervous system pain which results in the release of endorphins and can increase the work of the heart, which can affect venous return and cardiac output.

Systolic blood pressure is pressure on the arteries when the heart contracts (heart rate) or maximum pressure in the arteries at any time. Systolic blood pressure is seen from a greater number if read on a blood pressure measurement device. Diastolic blood pressure is blood pressure in the arteries when the heart is in a state of relaxation between two pulses. Diastolic blood pressure is seen from a smaller number when taking blood pressure measurements. The high systolic blood pressure is related to cardiac output while diastolic pressure is related to the amount of peripheral resistance (Purwandari, 2015).

It can be concluded that wet cupping therapy is more effective than dry cupping therapy for lowering blood pressure, because wet cupping therapy has an effect on blood pressure in hypertensive patients, one of which is reducing blood volume in the body by removing blood (Sharaf, 2012) while dry cupping causes a relaxing effect on organs including the heart, kidneys, veins, the relaxation effect will occur vasodilation of blood vessels that have previously undergone vasoconstriction resulting in a decrease in blood pressure in patients with hypertension (Umar, 2012).

Conclusion

Researchers have conducted a study entitled "Differences in the Effect of Wet Cupping Therapy with Dry Cupping Therapy on Back Points Against Decreasing Blood Pressure in Hypertensive Patients in Wonopringgo Village, Pekalongan Regency." The results of this study can be concluded as follows.

1. The systolic blood pressure of the respondent before being given wet cupping therapy was obtained an average of 151.92 mmHg and after being given wet cupping therapy of 140.38 mmHg while the diastolic blood pressure of the respondent before being given wet cupping therapy was obtained an average of 91.15 mmHg and after being given wet cupping therapy at 85.00 mmHg.
2. The respondent's systolic blood pressure before being given dry cupping therapy obtained an average of 151.54 mmHg and after being given dry cupping therapy of 148.08 mmHg while the diastolic blood pressure of the respondent before being given dry cupping therapy obtained an average of 90.00 mmHg and after being given dry cupping therapy at 87.69 mmHg.
3. Decreased blood pressure in wet cupping therapy more than dry cupping therapy. The decrease in the average systolic blood pressure after being given wet cupping therapy was 11.54 mmHg and diastolic blood pressure was 6.15 mmHg while the decrease in the average systolic blood pressure after being given dry cupping therapy was 3.46 mmHg and diastolic blood pressure was 2, 31 mmHg.
4. There is a difference in the effect of wet cupping therapy on dry cupping therapy on the back point to decrease blood pressure in hypertensive patients in Wonopringgo Village with p value 0,000.

References

- Arturo, A; Brandon, J; Diana, M; Andrew, C. (2017). "Effect of Dry Cupping on Vascular Function among Young Individuals". *International Journal of Health Science*, Vol.5, No.3, pp. 10-15.

- Aspiani, R.Y. (2014). *“Buku Ajar Asuhan Keperawatan Klien Gangguan Kardiovaskular Aplikasi NIC & NOC”*. Jakarta : Buku Kedokteran EGC.
- Kemenkes RI. (2018).
www.depkes.go.id/article/view/18051600004/hipertensi-membunuh-diam-diam-ketahui-tekanan-darah-anda.html.
dipublikasikan pada 18 Mei 2018.
Diakses pada 14 Desember 2018.
- Pratama, Y.B; Rasni, H; Wantiyah. (2018).
“Pengaruh Terapi Bekam Keing Terhadap Tekanan Darah pada Lansia dengan Hipertensi di PSTW Jember”. *The Indonesian Journal of Health Science*.
- Purwandari, Sagiran. *“Pengaruh Terapi Bekam terhadap Penurunan Tekanan Darah pada Pasien Hipertensi”*.(2015). [cited 2013 Okt 5]. Available from:<http://www.google.com/url?sa=t&rc=t=j&q=&esrc=s&source=web&cd=2&cad=rja&ved=0CC8QFjAB&url=http%3A%2F%2Fpublikasi.umy.ac.id%2Findex.php%2Fpenddokter%2Farticle%2Fview%2F4600%2F3933&ei=AM0GU6y8JIeErAfap4GgBQ&usg=AFQjCNFHsNqaAh6o9TlHiaDRAMyyOTpO6w&bvm=bv.61725948,d.bmk>.
- Sharaf, A.R. (2012). *“Penyakit dan Terapi Bekamnya Dasar-Dasar Ilmiah Terapi Bekam”*. Thibbia : Surakarta.
- Umar, W. A. (2012). *“Sembuh dengan Satu Titik”*. Solo : Al-Qowam Publishing.