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EFFECTIVENESS OF CUP THERAPY ON REDUCING BLOOD PRESSURE IN HYPERTENSION PATIENTS: A LITERATURE REVIEW

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ABSTRACT

Hypertension is a non-communicable disease that is the cause of premature death in the world. The diagnosis of hypertension is made when the systolic blood pressure is 140 mmHg and/or diastolic is 90 mmHg. Patients with hypertension are quite high, in the world there are 22% of the population, in Indonesia there are 63,309,620 people with hypertension. However, many people with hypertension are not obedient in its management. People prefer alternative medicine for reasons of affordable cost, not using chemicals, and the healing effect is quite significant. The purpose of this study was to identify the benefits of cupping, types of effective cupping and effective cupping points and the level of effectiveness of cupping therapy in reducing blood pressure in patients with hypertension. This study uses a descriptive-qualitative approach with a literature study method, literature search and selection using PICOST which is then analyzed by Compare and Synthesize. The results of the analysis stated that cupping was effective for reducing blood pressure in patients with hypertension, ranging from 12 -28.57 mmHg in SBP and in DBP decreased by 2.89-14.4 mmHg. The type of cupping that is effective is wet cupping at the top of the head and neck because this cupping goes through a detoxification mechanism at the point where there is a pathway that goes directly to the deepest part of the brain and is covered with blood vessels. Cupping is effective in lowering blood pressure in patients with hypertension, with the type and point of effective cupping being wet cupping at the top of the head and neck. Cupping needs to be made one of the compulsory subjects of the nursing science study program, so that in the future complementary therapy can be further enhanced in its promotion and application in cases of hypertension. It is also necessary to conduct further research regarding the effective duration of cupping to reduce blood pressure in hypertensive patients.

Keywords: Hypertension, Cupping, Blood Pressure

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1. BACKGROUND

Hypertension is a non-communicable disease that causes premature death in the world (Health et al., 2019). Hypertension or often called the silent killer is a major risk factor for other degenerative diseases such as stroke, coronary heart disease, myocardial infarction, congestive heart failure, kidney disease and death. The diagnosis of hypertension is made when the TDS is 140 mmHg and/or TDD is 90 mmHg on measurements at a clinic or health care facility (Antonia Anna Lukito, Eka Harmeiwaty, 2019).

The World Health Organization (WHO) estimates that currently the global prevalence of hypertension is 22% of the total world population. Where Southeast Asia ranks third as the population with the most hypertension in the world, namely 25% of the total population in Southeast Asia (Kesehatan et al., 2019). In Indonesia, the number of people with hypertension is 34.1% or 63,309,620 people (Riskesdas, 2018).

The high prevalence of hypertension is not matched by compliance in the management of hypertension, one of which is non-adherence to taking medication. Based on (Riskesdas, 2018) patients with hypertension who do not regularly take medication are 32.3% and those who do not take medication are 13.3%. The act of taking this drug is one of the pharmacological management of hypertension.

In the management of hypertension, apart from choosing pharmacology, complementary therapies can be used. Types of complementary therapies are acupuncture, cupping (Cupping Therapy), energy therapy (reiki), biological therapy (herbs), baby massage, reflexes (Sunnah & Sunnah, 2018). One of the complementary therapies that are useful for lowering blood pressure is cupping therapy.

This is supported by (Sedayu, 2017) cupping is effective in reducing blood pressure with the results of a decrease in systolic blood pressure of 13 mmHg and diastolic blood pressure of 6 mmHg. This is also supported by research conducted by (W. Astuti & Syarifah, 2018) conducted at the Mugi Barokah Health Clinic Karakan Godean Sleman Yogyakarta, with the results of a decrease in blood pressure of 11.66 mmHg in Systolic Blood Pressure (SBP), and by 7.8 mmHg in Diastolic Blood Pressure (DBP).

Although there has been a study in the form of a systematic review conducted by (Siregar et al., 2020) to determine the effectiveness of cupping therapy in reducing blood pressure in hypertensive patients in Indonesia, which is sourced from secondary data. However, in this study, only one database with a low reputation was used, namely Google Scholar. According to (Nursalam, 2020) a scientific paper in the form of a good review uses at least three databases that have a good reputation with low, medium and high levels.

2. METHOD

This research is a Literature Review with Protocol and evaluation using PRISMA checklist. The library search was carried out through three databases, namely ScieneDirect, PubMed, and Google Schoolar with the keywords "Hypertension AND Cupping AND Blood Pressure", the search was also carried out with the English keywords "Hypertension AND Cupping And Blood Pressure". From the search results, there were 640. Of these, there were 47 similar journals, so that there were 593 journals remaining, of which the researchers screened based on title (n = 593), abstract (n = 52) and Full text (n = 12) which were adjusted to literature review theme.

Quality assessment using the Critical Appraisal Tool, then the journals (n = 12) were analyzed using the Compare technique, namely by summarizing and critiquing the similarities of the articles both from the research design and the results of lowering blood pressure. In addition, this study also uses the Synthesize technique, namely by analyzing the advantages and disadvantages of each article related to the type of cupping used and the location of the cupping point applied to each research sample analyzed (n:12).

3. RESULTS

1. Study Characteristics

Research conducted using this literature review shows that most of the articles analyzed are in 2019 which is 33.3%. Judging from the research design used (n: 12) as many as (75.1%) used the Quasy Experiment research design. Based on sampling, most of the research used total sampling (50%), with most using one intervention group (58.3%). The research instrument used a sphygnomanometer and cupping equipment as much as (100%), and in conducting the analysis mostly used the dependent T-test as much as (33.5%).

2. Characteristics of Cupping Therapy

Based on a number of articles (n:12) which were reviewed, it was found that there were eight articles (66.7%) that used the wet cupping type in lowering blood pressure in the research sample, another article (8.3%) used the dry cupping type in providing intervention to lower blood pressure in the research sample, and one article (8.3%) further used dry cupping and wet cupping in lowering blood pressure, namely by dividing the research sample into two groups, the first group was given wet cupping intervention and the other group were given dry cupping treatment to determine the level of blood pressure reduction in each group. In addition, the other two articles (16.7%) did not mention or explain the type of cupping used.

Table 1. Characteristics of Cupping Therapy

No	Category	f	Persentase (%)
A. Types of Cupping Therapy			
1.	Wet Cupping	8	66,7
2.	Dry Cupping	1	8,3
3.	Wet Cupping X Dry Cupping	1	8,3
4.	Not mentioned	2	16,7
	Quantity	12	100
B. Cupping Point			
1.	Shoulders and Waist	1	8,3
2.	The center line between the two shoulders	2	16,7
3.	Top of head and neck	1	8,3
4.	Not Mentioned	8	66,7
	Quantity	12	100

Cupping therapy which is given with the aim of lowering blood pressure is based on having certain cupping points according to the needs of the cupping user. shoulder and waist points, two articles (16.7%) stated that the cupping was done at the midline point between the two shoulders (Al-Kahil), then another article (8.3%) mentioned that the cupping was done at the head and neck points, and The other eight articles (66.7) did not mention where the cupping point was used in their research sample.

3. Analysis

Table 2. Literature analysis

No	Author's name	Title	Location	Population and Sample	Results
1.	Heshu Sulaiman Rahman, et al (Rahman et al., 2020)	Wet Cupping Therapy Ameliorates Pain in Patients With Hyperlipidemia, Hypertension, And Diabetes	Sheefa's Private Center for Cupping and Acupuncture. (Iraq)	Patients at the Sheefa Cupping and Acupuncture Center, Sulaimaniyah Northern Iraq. Sample: 100 respondents	Before Cupping: Female: 102-164 mmHg Male: 103-165 mmhg After cupping: Female: 102-121 mmHg Male: 103-125 mmhg
2.	Windarti, Noor sari Asitiya, Dwi Lestari Palupi (Aditiya, 2019)	The Effect Of Wet Therapy on Blood Pressure Reduction in Hypertension Patients in The Clinic Bekam Lahtahzaan Karanganyar	Clinic Lahtahzaan Cupping Karanganyar Clinic Cupping Lahtahzaan Karanganyar, Indonesia	Population: 30 people Sample: 30 respondents	Before After T1 : 16 T1: 22 T2: 9 T2: 4 T3 : 5 T3: 4
3.	Moawi M Al-Tabakha, et al (Al-Tabakha et al., 2018)	Evaluation of Bloodletting Cupping Therapy in The Management of Hypertension	Ajman and Sharjah (UAE). Arab	Population; 60 patients Sample: 60 respondents	Before Control: 140-172/70-113 mmhg Intervention: 140-170/70-110 mmhg After Control: 140,4/ 86 mmhg Intervention: 130,8/87 mmhg
4.	Windi Imaningtias, M. Projo Angkasa, Sri Mumpuni Yuniarsih (Imaningtias et al., 2019)	The Effectivieness of Wet Cupping and Dry Cupping In Reducting Blood Pressure in Hypertension Patients	Pekalongan West Java Indonesia	Population: 52 patients Sample: 52 respondents	Decrease in blood pressure after cupping Wet Dry TDS 11,54 3,46 TDD 6,15 2,31
5.	Hamid Mukhlis, et al (Mukhlis et al., 2020)	Cupping Therapy For Hypertensive Patients: A Quasi-Experimental Research With Time Series Design	Pringsewu, Lampung Indonesia	Population: 20 Patients Sample: 20 respondents	Before: a.170,65/101,65mmhg b.160/87,55 mmhg After: a.153,5/87,25 mmhg b.138/79,75 mmhg
6.	Budi Darmawan, Diyah Fatmasari, Rr. Sri Endang Pujiastuti	Negative Air Pressure on Wet Cupping in Decreasing Blood Pressures in Hypertensive Patients	Aceh, Indonesia	Population: 36 respondents Sample: 36 respondents	Before: Control: 156,72/99,72 mmhg Intervention: 156,22/98,33 mmhg

	(Darmawan et al., 2017)				After: Control: 154,94/98,06 mmhg Intervention: 152,94/95,44 mmhg
7.	Muflih Muflih, Mohamad Judha (Muflih et al., 2019)	Effectiveness Of Blood Pressure Reduction Reviewed From Amount Of Kop, Duration And Location Of Point Of Bekam Therapy	Klaten Indonesia	Population 200 respondents Sample: 40 Respondents	Before: 138,13/90,60 mmhg After: 126,13/82,15 mmhg
8.	Yufi Aris Lestari, Aris Hartono, Ucik Susanti (Lestari et al., 2017)	The Effect of Cupping Therapy on Blood Pressure Changes in Hypertension Patients in Tambak Rejo Hamlet, Gayaman Village, Mojokerto	Mojokerto East Java Indonesia	Population 32 respondents Sample 28 Respondents	Before; Control:155,71/100,71 mmhg Intervention: 161,42/100 mmhg After: Control: 164,28/ 104,28 mmhg Intervention: 132,85/ 89,28 mmhg
9	Yogie Bagus Pratama, Hanny Rasni, Wantiyah (Pratama et al., 2018)	Effect of Dry Cupping Therapy on Blood Pressure in Hypertensive Patients in Pstw Jember	Jember, East Java Indonesia	Population: 22 Respondents Sample: 22 Respondents	Before Control:140/80 mmhg Intervention: 140/80 mmhg After: Contol:145/80 mmhg Intervention: 140/80 mmhg
10.	Tumiur Sormin (Sormin, 2019)	The Effect of Cupping Therapy on Blood Pressure of Hypertensive Patients	Bandar lampung, Indonesia	Population 48 respondents Sample; 40 Respondents	Before: 152,50/89,25 mmhg After: 134,25/82,75 mmhg
11.	Susi Susanah, ani Sutriningsih, warsono (Susanah et al., 2017)	The Effect of Cupping Therapy on Blood Pressure Reduction in Hypertension Patients at Trio Husada Polyclinic, Malang	Malang, East Java Indonesia	Population: 23 respondents Sample 23 respondents	Before: 164,78/101,52 mmhg After: 153,04/94,13 mmhg
12.	Muhammad Habi Burasyid, M. Anis Zawawi (Burasyid Muhamad Habi, 2019)	The Effect of Thibbun Nabawi Cupping Therapy on Cholesterol, Blood Sugar, and Blood Pressure Levels Before and After Therapy at the Crew Cupping Clinic Kediri in 2018	Kediri, East Java Indonesia	Population: 15 respondents Sample: 15 Respondents	Before: 148/92,67 mmhg After: 131,37/83,33 mmhg

4. DISCUSSION

Based on the articles (n:12) analyzed in terms of the year of publication, these twelve articles were published from 2017-2020, which means that the articles analyzed are references that can be said to be up-to-date. Based on the studies used, starting from the Controlled Clinical Study, Quasi Experiment, Quasi Experimental, Pre-Experimental, and Retrospective. This shows that the results and conclusions of these twelve articles are primary data so that their validity is quite good. Decreased blood pressure in patients with hypertension after cupping, among others, in the dry cupping type, there was a decrease in systolic blood pressure (SBP) of 3.46 mmhg and diastolic blood pressure (DBP) of 11.2 mmhg. In wet cupping therapy, blood pressure decreased by 12 -28.57 mmHg in SBP and in DBP decreased by 2,89-14.4 mmHg. The mean reduction in blood pressure from (n:12) was 14.45 mmHg with SD of 7.29 in SBP, and 6.72 mmHg with SD of 3.14.
There is a significant difference in the reduction of blood pressure in patients with hypertension. This is because in wet cupping therapy there is a release of nitric oxide which causes blood vessels to widen, makes blood vessels stronger and more elastic, controls the hormone aldosterone so that the volume of blood flowing in the veins decreases and blood pressure decreases steadily, while dry cupping has an effect. relaxation in organs, including the heart and kidneys, the effect of relaxation will be vasodilation of blood vessels that have previously experienced vasoconstriction so that there can be a decrease in blood pressure in patients with hypertension (Asmalinda & Sapada, 2018)

In providing treatment in the form of cupping to patients with hypertension, of course, it is done at certain points according to the complaints of hypertension sufferers. Of the twelve articles analyzed, there is one article that mentions cupping points carried out on the shoulders and waist (Susanah et al., 2017). This research was conducted at the trio husada polyclinic in Malang with a total of 23 respondents, there was a decrease in blood pressure after cupping at the waist point and back of 11.74 mmHg for SBP and 7.39 for DBP. In the study (Mukhlis et al., 2020) Cupping was performed at the top of the head and neck with an average decrease in blood pressure of 19.6 mmHg in SBP and 11.2 mmHg in DBP. In a study conducted by (Darmawan et al., 2017) cupping in hypertension patients with a total of 36 samples was carried out at the midline point between the two shoulders (Alkahil) there was a decrease in SBP blood pressure of 3.28 mmHg and 2.89 mmHg in DBP, Likewise research conducted by (Rahman et al., 2020) cupping was carried out at the midline point between the two shoulders in 100 samples with 50 women and 50 men, there was a decrease in blood pressure of 12 mmHg in women and 9 mmHg in men. man.

Based on the analysis carried out, there are three points that are generally used in performing cupping in patients with hypertension, namely at the point of the shoulder and waist, above the head and neck and the midline between the two shoulders (Al kahil). Between these three points there is a significant decrease in blood pressure at the top of the head and neck (Mukhlis et al., 2020), this is related to this area there is a pathway that goes directly into the deepest brain which is covered with blood vessels. Cupping focuses on one area, namely the skin (cutis), subcutaneous tissue (subcutis), fascia, and muscle damage to mast cells or basophils will occur. As a result of its damage, several substances are released such as serotonin, histamine, bradykinin, slow-acting substances (SRS), and other harmful substances. These substances cause capillary and arteriolar vasodilation and flare reactions in the treated area. This capillary dilation can also occur around the area causing increased microcirculation of blood vessels, relaxation of stiff muscles, and will gradually lower blood pressure (Kasmui dalam Mukhlis, 2020). Based on this, cupping can be used as a reference for lowering blood pressure in hypertensive patients. This is in line with research conducted by (Saputra, 2018) with the article title "The Effectiveness of Cupping Against Blood Pressure Reduction in Patients with Hypertension" which shows the results of blood pressure in patients which before cupping the patient's blood pressure is 140/90 mmHg and after cupping. There was a decrease in blood pressure of 130/95 mmHg. In addition, a study conducted by (D. P. Astuti, 2018) with the title "The Effectiveness of Wet Cupping in Hypertensive Patients: Systematic Review" showed significant analytical results in changes in systolic and diastolic blood pressure in the three studies obtained. Thus it can be stated that cupping is effective in lowering blood pressure in hypertensive patients.

5. CONCLUSION

Based on twelve articles reviewed regarding the effectiveness of cupping therapy in reducing blood pressure in patients with hypertension. From these twelve articles, it was shown that there was a decrease in blood pressure in patients with hypertension after cupping, starting from 12 -28.57 mmhg in SBP and in DBP it decreased by 2.89-14.4 mmhg, so it can be concluded that cupping therapy can significantly reduce blood pressure in hypertensive patients.

From the twelve articles analyzed, the types of cupping that are most often used to lower blood pressure are wet cupping and dry cupping. From the results of the analysis, wet cupping has a better level of effectiveness than dry cupping with the most effective cupping points being at the top of the head and neck. So based on this analysis, wet cupping at the top of the head and neck can be recommended as an alternative treatment for the treatment of hypertension.

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