

THE EFFECT OF WET CUPPING THERAPY ON REDUCING CHOLESTEROL LEVELS IN MENOPAUSE WOMEN

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ABSTRAK : PENGARUH TERAPI BEKAM BASAH TERHADAP PENURUNAN KADAR KOLESTEROL PADA WANITA USIA MENOPAUSE DI WILAYAH KERJA PUSKESMAS KUIN RAYA

Latar Belakang: Menopause merupakan salah satu tahapan yang akan dilewati oleh seorang wanita, hal ini ditandai dengan terhentinya menstruasi secara permanen. Sebagian besar wanita menopause mengalami kenaikan kadar kolesterol dikarenakan penurunan fungsi tubuh, salah satunya penurunan hormon estrogen yang memiliki peran sebagai pengatur kadar kolesterol. Kadar kolesterol yang tinggi dapat berdampak pada timbulnya penyakit kardiovaskular. Data dari Dinas Kesehatan Kota Banjarmasin di tahun 2022 menyatakan sebanyak 856 orang wanita usia 45 keatas mengalami penyakit kardiovaskular.

Tujuan: Menganalisis pengaruh terapi bekam basah terhadap penurunan kadar kolesterol pada wanita usia menopause.

Metode: Penelitian ini menggunakan rancangan *pre eksperiment* dengan desain *One Group Pretest Posttest*. Pengambilan sampel ini dengan teknik *purposive sampling*. Jumlah sampel 30 wanita menopause dengan kadar kolesterol tinggi (> 200 mg/dL). Data penelitian ini diambil dengan menggunakan lembar observasi kadar kolesterol sebelum dan sesudah diberikan terapi bekam basah. Kemudian data dianalisis dengan menggunakan uji *Wilcoxon*.

Hasil: Kadar kolesterol sebelum diberikan terapi bekam basah mayoritas adalah kategori tinggi 100% dan setelah diberikan terapi bekam basah mayoritas kadar kolesterol turun menjadi normal sebesar 80%. Analisis bivariat berdasarkan uji *Wilcoxon* diperoleh nilai P_{value} sebesar 0,000 ($< 0,05$) sehingga H_1 diterima.

Kesimpulan: Terdapat pengaruh terapi bekam basah terhadap kadar kolesterol pada wanita usia menopause.

Saran: Diharapkan masyarakat khususnya wanita menopause mengetahui secara umum manfaat yang dihasilkan oleh terapi bekam basah dan bisa menjadi terapi alternatif untuk penurunan kadar kolesterol dalam tubuh.

Kata Kunci: Bekam Basah, Kolesterol, Menopause

ABSTRACT

Background: Menopause is one of the stages that a woman will go through, it is characterized by the permanent cessation of menstruation. Most menopausal women experience an increase in cholesterol levels due to a decrease in body function, one of which is a decrease in the hormone estrogen which has a role as a regulator of cholesterol levels. High cholesterol levels can have an impact on the onset of cardiovascular disease. Data from the Banjarmasin City Health Office in 2022 stated that as many as 856 women aged 45 and over experienced cardiovascular disease.

Purpose: Analyzing the effect of wet cupping therapy on lowering cholesterol levels in women of menopausal age.

Methods: This study used a pre-experiment design with a One Group Pretest Posttest design. Sampling was done using purposive sampling technique. The sample size was 30 menopausal women with high cholesterol levels (> 200 mg/dL). This research data was taken using an observation sheet of cholesterol levels before and after being given wet cupping therapy. Then the data were analyzed using the Wilcoxon test.

Results: Cholesterol levels before being given wet cupping therapy the majority were 100% high category and after being given wet cupping therapy the majority of cholesterol levels dropped to normal by 80%. Bivariate analysis based on the Wilcoxon test obtained a Pvalue of 0.000 (< 0.05) so that H_1 is accepted.

Conclusion: There is an effect of wet cupping therapy on cholesterol levels in women of menopausal age.

Suggestion: It is hoped that the community, especially menopausal women, will know in general the benefits produced by wet cupping therapy and can be an alternative therapy for lowering cholesterol levels in the body.

Keywords: Wet Cupping, Cholesterol, Menopause

INTRODUCTION

Menopause is one of the stages that a woman will go through. This stage is characterized by the permanent cessation of menstruation. Data from the World Health Organization (WHO) states that by 2030 the number of menopausal women worldwide could reach 1.2 billion people. According to the Central Bureau of Statistics (BPS), the elderly population in 2022, women who entered menopause made a considerable contribution, as much as 18.10% of the total population. In Indonesia, the average age of women entering menopause is in the age range of 48 years. In the province of South Kalimantan, the number of people of menopausal age has a percentage of 5.78%, totaling 681,923 people. And the number of people of menopausal age in Banjarmasin City in 2022 reached 251,077 people (Badan Pusat Statistik, 2022).

The menopause should be a more positive and fulfilling period of life for every woman, such as weight control, mental health and avoidance of serious illness (Suryoprajogo, 2019). One of the most common diseases suffered by menopausal women is high cholesterol or commonly referred to as hypercholesterolemia, this is because as a woman ages, there will be a decrease in body function, one of which is a decrease in ovarian function. Ovaries are responsible for producing the hormone estrogen in the female body. The estrogen hormone has a role in relaxing the arteries which can increase blood flow and also as an antioxidant (Bintanah & Mufnaetty, 2021). Cholesterol in most women increases due to the postmenopausal decline in estrogen. A decrease in estrogen in a woman's body can result in impaired blood fat metabolism and increased body weight. Blood cholesterol also changes when estrogen levels decrease, increasing LDL levels and increasing the risk of heart disease (Riyadina, 2019). In general, total cholesterol, LDL cholesterol, as well as dyslipidemia in climacteric women with menopausal status, show a progression towards an atherogenic profile and a higher risk of cardiovascular disease (CVD) from the reproductive to postmenopausal phase (Putu Sutisna et al., 2022). So that the hormone estrogen has an important role in controlling cholesterol levels in the body, namely being an antioxidant function (Hyvärinen et al., 2022).

Patients with high cholesterol in Indonesia can be said to be quite high, reaching 28% and 7.9% of them died due to this disease (RSST, 2022). The percentage of the Indonesian population who have total cholesterol levels above normal is greater

among women (54.3%) than men (48%). High cholesterol levels can have adverse effects on health, the higher the cholesterol levels in the blood, the higher the risk of cardiovascular disease. Data from the Banjarmasin City Health Office in 2022 stated that as many as 856 women aged 45 to more than 60 years experienced cardiovascular disease. Kuin Raya Health Center is one of the health centers in Banjarmasin City with data on cardiovascular disease experienced by women aged 45 to more than 60 years as many as 137 people. (Dinas Kesehatan Kota Banjarmasin, 2022).

Patients with cardiovascular disease in Indonesia are dominated by the elderly with a majority of women (Perhimpunan Dokter Spesialis Kardiovaskular Indonesia (PERKI), 2017). Pharmacological treatment of hypercholesterolemia is widely sold in the market. Statin drugs are a therapy that is often given by health workers to reduce cholesterol levels. However, there are some side effects that can be caused if you take statin drugs too often such as nausea, constipation, abdominal cramps, headaches and muscle pain (Hidayat dkk., 2018). Apart from pharmacological treatment, hypercholesterolemia can also be treated with herbal medicines, Thai-chi exercises and cupping therapy (Arozi & Wibowo, 2018).

The use of traditional medicines and herbs has become an alternative option for those seeking ways to lower cholesterol naturally. Herbs that contain antioxidant compounds, flavonoids, and omega-3 fatty acids have been known to have effects in reducing high cholesterol levels. For example, flaxseed containing alpha-linolenic acid (ALA) has been found to lower the risk of heart disease and reduce high cholesterol levels. Garlic has also been found to have antioxidant properties that can reduce high cholesterol levels and prevent the formation of atherosclerosis. In recent years, studies have shown that some other herbs, such as soy beans, bay leaves, and grapefruit, also have potential in lowering cholesterol. Soy beans, for example, contain fiber that can help lower cholesterol levels in the body effectively by reducing the amount of bile salts. Bay leaves, on the other hand, contain flavonoids that can reduce high cholesterol levels. Grapefruit, which contains pectin, has been found to lower cholesterol by binding to cholesterol in the gut and reducing its absorption into the bloodstream. It's just that traditional medicines cannot be consumed directly by patients, there are several stages that must be passed such as collecting ingredients, cleaning to processing, so it is less practical. While cupping

therapy has several advantages over traditional medicines in lowering cholesterol such as the effectiveness of rapid reduction, sustainable effects, practical use and does not contain chemicals.

Cupping is commonly referred to as al-hijamah, this word comes from Arabic which means to prevent, suck, turn away, bite, peck, keep away. In the context of medicine cupping can be interpreted to be a blood suction with a cupping tool. Cupping is the process of removing harmful static blood (toxins) in the body by means of a light wound and then suctioned with a cupping tool (Suswitha et al., 2022). In Indonesia, cupping therapy has become popular among the public. Cupping is one of the alternative treatments that is sunnahkan in Islam. The Prophet Muhammad SAW said, "Indeed, in cupping there is healing." (Kitab Mukhtashar Muslim (no. 1480), Shahihul Jaami' (no. 2128) dan Silsilah al-Hadiits ash-Shahiihah (no. 864), karya Imam al-Albani). Several scientific studies, one of which was conducted by Siti Nur Hasina & Ellya Chandra Hariyani in 2021 to find out whether there is an effect of wet cupping therapy on reducing high cholesterol levels or hypercholesterolemia, and obtained quite good results in reducing high cholesterol levels, so cupping can be an alternative treatment in hypercholesterolemia patients. Cupping therapy can remove toxic substances including cholesterol that are not absorbed by the body through the surface of the skin by wounding and suction (Hasina & Hariyani, 2021).

Cupping therapy given in this study uses wet cupping therapy. This is because when wet cupping therapy is performed, excess cholesterol plaques that accumulate in blood vessels and stimulation of the lipolysis process of fat tissue during cupping cause the total cholesterol levels of cupping therapy patients to drop. There are eight cupping points that are recommended for people with high cholesterol, namely at the point of Azh-Zhahr. The suction, or shoveling, of the cupped skin creates negative pressure, which helps to remove cholesterol plaques. In addition, the negative pressure causes passive congestion of the local tissue on the superficial surface and increases the dilatation of blood vessels (Rahmanda dkk., 2016). In contrast to wet cupping therapy, the implementation of dry cupping therapy does not make an opening to remove blood in the body. Dry cupping therapy is a technique of sucking on the surface of the skin and massaging the surrounding area which is done without bleeding (Nur Alfitha et al., 2023). Dry cupping therapy can have a positive effect in relieving pain, improving blood circulation, and providing a relaxing effect on the body. The relaxation effect can help relax stiff

muscles, reduce pain and get rid of wind in the body (Agustin Lutfiana dkk., 2018).

According to preliminary studies conducted on December 15, 2023 in the Kuin Raya Health Center working area, by conducting brief interviews with 13 women aged 45-60 years, it was found that 11 women had high cholesterol levels and 7 of them did not know about cupping therapy as an alternative treatment that could reduce high cholesterol levels. This illustrates that the general public has not been exposed to this alternative treatment, especially in the menopausal age group of women.

RESEARCH METHODS

This study uses quantitative research and the method used is Pre-Experiment with One Group Pre-Post Test Design. This research was conducted in the working area of Kuin Raya Health Center, Banjarmasin City. The population used in this study were women of menopausal age in the Kuin Raya Health Center working area of 455 people. The sample used in this study was 30 respondents in accordance with the minimum sampling limit in pre-experimental research, this sampling was in accordance with the inclusion and exclusion criteria determined by the researcher.

The data collection instruments used in this study were data collection forms, simple cholesterol checker autocheck brands, observation sheets and cupping SOPs. The study was conducted by checking cholesterol before wet cupping therapy was given, then after 24 hours of wet cupping therapy, cholesterol levels were checked again to compare cholesterol levels before and after wet cupping. After the data is obtained, the data is then tested for normality. To find out whether a data is normally distributed or not. The results of the normality test showed that the data in the study were not normally distributed, then continued with the Wilcoxon test analysis to test the effect of a treatment.

RESEARCH RESULTS

Univariate analysis

Respondents taken in this study were 30 people. Which have been selected according to the inclusion and exclusion criteria. The following data results appear during the study.

Table 1
Cholesterol Level of Menopausal Women Before Wet Cupping Therapy

Cholesterol Level Category	Before Wet Cupping Therapy	
	Frequency	Percentage (%)
Normal	0	0
High	30	100

Based on table 1, it is known that cholesterol levels in menopausal women as a whole are in the high category, namely 30 respondents (100%). During or after menopause, a woman's cholesterol levels can increase due to reduced levels of the hormone estrogen. Menopausal women are considered vulnerable to having high cholesterol levels due to a decrease in the hormone estrogen which plays a role in balancing bad (LDL) and good (HDL) cholesterol in the body. Women of menopausal age are more prone to developing high cholesterol and have a higher risk of heart attack due to the decrease in estrogen hormone levels which can lead to an increase in LDL cholesterol. Estrogen hormone has a protective effect on blood vessel walls and the composition of LDL and HDL cholesterol, maintaining the elasticity of blood vessels, including the blood vessels of the heart (Jati, 2022). The causes of increased cholesterol levels in menopausal women besides the decrease in estrogen hormones are overweight, lack of active movement and unhealthy habits (Teixeira et al., 2019).

Overweight people tend to have high cholesterol levels, especially bad cholesterol (LDL), which is a risk factor for heart disease and other health problems. Obesity can lead to metabolic system disorders such as hypercholesterolemia, where the condition of excess body fat can increase cholesterol levels in the blood (Solikin & Muradi, 2020). Moreover, being overweight is often accompanied by unhealthy eating habits and lack of physical activity, which can also contribute to elevated cholesterol levels. Therefore, maintaining an ideal body weight through a healthy diet and regular exercise is essential for controlling cholesterol levels and maintaining overall health (Lim & Salvirah, 2024).

In addition, inactivity can also increase cholesterol levels because low physical activity or sedentary habits can cause fat accumulation in the body and interfere with fat metabolism, including cholesterol. Lack of physical activity can reduce good

cholesterol (HDL) levels and increase bad cholesterol (LDL) in the blood. Then, unhealthy eating habits, such as eating unhealthy foods, can increase the risk of high cholesterol in menopausal women. Unhealthy foods can raise bad cholesterol (LDL) levels and lower good cholesterol (HDL), which are risk factors for heart disease and other health problems (Agustina, 2022). Although menopause itself does not cause high cholesterol, as the protective effect of estrogen on cholesterol decreases, the incidence of elevated cholesterol can very easily occur (Sullivan & Ames, 2022).

Table 2
Cholesterol Level of Menopausal Women After Wet Cupping Therapy

Cholesterol Level Category	After Wet Cupping Therapy	
	Frequency	Percentage (%)
Normal	24	80
High	6	20

Based on the results of research that has been conducted by researchers, it shows that the cholesterol levels possessed by respondents after being given wet cupping therapy have mostly decreased. Of the 24 respondents (80%) experienced a decrease in cholesterol levels reaching normal values (< 200 mg/dL). Then there were 6 respondents (20%) whose cholesterol levels did not reach normal values.

Researchers use wet cupping therapy because wet cupping therapy works by increasing tissue oxygenation in patients with hypercholesterolemia and the body's ability to excrete cholesterol physiologically after cupping therapy. In addition, wet cupping therapy can also help in the removal of LDL cholesterol through venous blood, as well as increase Apo-B levels and reduce the amount of LDL cholesterol in patients with hypercholesterolemia. Some studies have shown that wet cupping therapy can reduce total cholesterol, LDL, and increase High Density Lipoprotein (HDL), which is the good cholesterol. Cupping therapy is also known to have a preventive effect on the occurrence of atherosclerosis, which is the buildup of plaque in the arteries that can cause heart disease (Solichin Putri & Larasati, 2020).

Bivariate Analysis

Table 3
 Cholesterol Levels of Menopausal Women Before and After Wet Cupping Therapy

Cholesterol Level Category	Wet Cupping Therapy				P _{value}	Difference Mean
	Before		After			
	Frequency	Percentage	Frequency	Percentage		
Normal	0	0	24	80	0,000	29,4
High	30	100	6	20		

Based on the table above, it is found that before being given wet cupping therapy, there were 30 respondents (100%) who had high cholesterol levels. However, after being given wet cupping therapy, as many as 24 respondents (80%) cholesterol levels dropped to normal, while 6 respondents (20%) did not reach normal cholesterol levels after being given wet cupping therapy. The results of the analysis using the Wilcoxon test showed a P_{value} of 0.000 (<0.05) so that H1 was accepted.

DISCUSSION

This study was conducted within 24 hours, the difference in cholesterol levels before and after cupping therapy was obtained, the average value was 29.4 mg/dL. Of the 30 respondents who were given wet cupping therapy, there were 24 respondents who experienced a decrease in reaching the normal cholesterol category, namely < 200 mg/dL, after researchers observed cholesterol levels before wet cupping therapy in 24 respondents had high limit category cholesterol levels (200-239 mg/dL), tending to fall more easily into the normal category after being given wet cupping therapy. While the other 6 respondents had cholesterol levels before being given wet cupping therapy included in the high category (>239 mg/dL) so that the decrease in cholesterol levels after being given wet cupping therapy could not reach normal limits.

Overall, respondents experienced a decrease in cholesterol levels after being given wet cupping therapy. But there was 1 respondent who experienced an increase in cholesterol levels after being given wet cupping therapy. When the researcher traced it by conducting an anamnesis, it turned out that the respondent after performing wet cupping therapy, ate a lot of foods containing excess fat and oil. Food is one of the factors for increasing cholesterol in the body (Direktorat Pencegahan Dan Pengendalian Penyakit Tidak Menular, 2019). Foods with high levels of fat, such as fried foods, foods containing trans fats, and foods made from processed meats, such as shrimp, meat, and offal can increase the level of bad cholesterol (LDL) in the blood, which can clog blood vessels and form plaque,

which in turn can inhibit blood flow in the body. (Husen et al., 2022).

In research conducted by Uda'a et al, (2023), The results are the same, namely that there are respondents who experience an increase in cholesterol levels after wet cupping therapy. Over all there is a decrease in cholesterol levels after cupping therapy. In the study, it was stated that the increase in cholesterol levels could be caused by differences in body response regulation in each respondent, consumption of foods containing high fat, age and body metabolic processes, frequency of cupping interventions that tended to be short and observation of cholesterol levels after cupping therapy that was too fast.

Compared to a study conducted by Bebi and Indrawati in 2019 entitled The Effect of Cupping Therapy on Decreasing Total Cholesterol Levels in Hypercholesterolemia Elderly in Sambong Dukuh Hamlet, Jombang showed that total cholesterol levels in hypercholesterolemia elderly before cupping therapy were in the high category, while after cupping therapy it became the normal category. The research time ranged from 3 months with the treatment given cupping therapy once a month to the respondents. In the Wilcoxon test obtained a P_{value} of 0,000 < α ($\alpha=0,05$) then H1 is accepted. The results of this study found that overall respondents experienced a decrease in cholesterol levels after being given wet cupping therapy.

In line with research conducted by Ali et al., in 2020 entitled Response of Cholesterol to Cupping Therapy in Post-Menopausal Women with Hypercholesterolemia stated that there was a significant decrease in cholesterol in women of menopausal age after being given wet cupping therapy once for 3 consecutive months. This test was conducted on 40 women of menopausal age who were divided into 2 equal groups. Group A received cupping therapy while group B was not given any therapy. Both groups were checked for cholesterol levels before and after treatment, when a comparison was made the group that received wet cupping therapy treatment showed a statistically significant decrease. So that wet cupping therapy is an effective method to reduce cholesterol levels in women of

menopausal age who experience hypercholesterolemia.

Judging from the length of cupping therapy, it turns out that it can affect the results obtained in reducing total cholesterol levels, especially in women of menopausal age. The more often the cupping therapy is given, the better the results of lowering cholesterol levels.

CONCLUSIONS

Based on the results of data analysis, researchers can draw the conclusion that there is an effect of wet cupping therapy on reducing cholesterol levels in women of menopausal age in the Kuin Raya Health Center working area.

SUGGESTIONS

For women entering menopause, it is hoped that they will know in general the benefits produced by wet cupping therapy and can be an alternative therapy for reducing cholesterol levels in the body. And for health workers, the results of this study can be a motivation to use or combine pharmacological and non-pharmacological therapies that can be used as a form of intervention in providing services to reduce cholesterol levels in women of menopausal age.

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