

LITERATURE REVIEW WET CUPPING TECHNIQUE ON URIC ACID LEVELS IN PATIENTS WITH HYPERURICEMIA

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ABSTRACT

Uric acid is an acid that is formed as a result of purine metabolism in the body. Higher uric acid levels in the blood will cause an inflammatory reaction or inflammation that causes swelling and pain. The prevalence of suffering from gout (gout) in Dharmasraya is 754 elderly. The purpose of the literature review is to review the effect of cupping on uric acid. The method of Literature review is carried out based on the issue. In the literature, this journal uses an average of 5 pre-experimental research journals with a pre-test - post-test design. The literature review strategy according to PICO and periodicals used for literature obtained through data from national and international journal providers through Google Scientist. Results: Based on 5 studies, it was found that one of the results was obtained. The statistical analysis used in this study was paired t-test statistical analysis. Uric acid levels before and before cupping therapy were 4.91 and 4.33, respectively. Based on the t-test of differences in blood uric acid levels before and before cupping therapy, the value of $t = 2.46$ ($p = 0.02$) p-value is smaller than ($\alpha = 0.05$) this indicates that there is a difference in blood acid levels before and before cupping therapy significantly. Discussion: From these 5 journal studies, it can be said that wet cupping therapy can reduce uric acid levels

Keywords: cupping, gout

ABSTRAK

Asam urat merupakan asam yang terbentuk akibat metabolisme purine didalam tubuh. Kadar asam urat dalam darah melebihi normal akan menyebabkan reaksi inflamasi atau inflamasi yang menyebabkan pembengkakan kemerahan dan nyeri. Prevalensi menderita goutathritis (gout) di Dharmasraya adalah 754 lansia . Tujuan dari literatur review adalah mereview pengaruh pengaruh bekam terhadap asam urat. *Literatur review* dilakukan berdasarkan *issue*, Dalam tinjauan pustaka, jurnal ini menggunakan rata-rata 5 jurnal penelitian menggunakan pra-eksperimen dengan desain pra-tes - pasca-tes. Dalam strategi literature review sesuai dengan PICO dan jurnal yang digunakan untuk tinjauan pustaka yang diperoleh melalui data dari penyedia jurnal nasional dan internasional melalui Google Scientist.: Berdasarkan 5 penelitian didapatkan bahwa salah satu hasil yang di dapat Analisis statistik yang digunakan dalam penelitian ini adalah analisis statistik uji-t berpasangan. Kadar asam urat sebelum dan sebelum terapi bekam masing-masing adalah 4,91 dan 4,33. Berdasarkan uji-t perbedaan kadar asam urat dalam darah sebelum dan sebelum terapi bekam, nilai $t = 2,46$ ($p = 0,02$) nilai p lebih kecil dari ($\alpha = 0,05$) ini menunjukkan bahwa ada perbedaan kadar asam dalam darah sebelum dan sebelum terapi bekam secara signifikan.

Dari 5 studi jurnal tersebut, dapat dikatakan bahwa terapi bekam basah mampu menurunkan kadar asam urat

Kata kunci: Bekam, asam urat

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1. INTRODUCTION

Uric acid is an acid that is formed as a result of purine metabolism in the body. Research that proves that coffee also increases blood uric acid levels, gout disorders are characterized by a sudden attack in the joint area. (Permatasari, 2018). Hyperuricemia is a condition where there is an increase in blood uric acid levels above normal. The limit is said to be hyperuricemia if the uric acid level is above 7 mg% in men and above 6 mg% in women (Wortmann, 2009). Serum uric acid levels are the result of a balance between production and secretion processes. When there is an imbalance between these two processes, a state of hyperuricemia occurs, which causes uric acid hyper saturation, namely the solubility of uric acid in serum that exceeds the threshold, thereby stimulating urate deposits in the form of salts, especially monosodium urate in various tissue sites (Hidayat, 2009).

According to the WHO 2018 in the world gout has increased by 1370 (33.3%) (Ndede, 2019). Gout in Indonesia (WHO, 2015) which occurs at the age of under 34 years is 32% and above 34 years is 68% (Juliana, Suhadi, 2017). Data for uric acid in the province of East Java based on the diagnosis of NAKES or symptoms of joint disease is 26% (Thayibah, 2018). Based on data from the Jombang District Health Office in 2014, the number of patients with gout was 28,987 people (Juhari, 2016). Wet cupping is an alternative treatment method by removing blood contaminated with toxins or oxidants from the body through the surface of the epidermis. This treatment is widely used by the community because it is cheaper, direct, and friendly, as well as the mindset of the people who think that treatment with synthetic chemicals, apart from being able to treat a disease, also causes other congenital diseases as a side effect of chemicals. The mechanism of cupping in reducing uric acid levels in the blood, namely through stimulation of the skin in the form of touch, massage, cupping knife or lancet incision will cause mast cells to release several substances such as serotonin, histamine, bradykinin, slow-reacting substance (SRS). Histamine is useful in the process of repairing diseased cells, anti-inflammatory, and stimulates the formation of reticuloendothelial cells, which will increase the body's resistance and immunity (Permatasari, 2012).

2. METHOD

In the literature review, this journal uses 5 research journals on average using a pre-experiment with a pre-test - post-test design. In the literature review strategy, look for journals that have the same statement and are used to conduct literature journals that are in accordance with the PICO and journals used for literature reviews obtained through data from national and international journal providers through Google Scientist. The authors and researchers opened the website www.google.com, researchers wrote keywords according to MESH (Medical Subject Heading) namely "hyperuricemia", "uric acid", "wet cupping" and selected full text, journal findings sorted from the most recent. Each question is in accordance with the PICO where each question has P = problem / patient / population, I = implementation / intervention, C = control / comparison intervention, O = result. The author also conducted relevant research to obtain data to write a journal about the effect of cupping therapy on gout

3. RESULT

From the results of the study, it can be seen that most patients with gout (hyperuricemia) are in the 50 year age category, both in the case group and the control group. The high prevalence

of uric acid in people over 50 years old is caused by several things. One of them is because of today's fast-paced lifestyle. Actually, the "seeds" of gout or the symptoms of the disease have appeared when you were young, but are always ignored so that it becomes more severe in old age. In addition, the cause of the high rate of gout in old age is an unhealthy lifestyle. Food care is not controlled, then there is nutrition in the body. This also results in heavy kidney work, resulting in gout. This condition is also above with the body's metabolism at the age of 50 years has decreased so that uric acid is increasing. 90% of gout is caused by the kidneys not being able to completely excrete uric acid through urine (Akhtar et al., 2017).

The results of the study obtained data that the majority of gout sufferers suffered by farmers in both the case group and the control group. In the case group returned while 40% in the control group was 43.3%. The high gout sufferers who work as farmers are caused by several things, namely; From the observation, it was found that most of the farmers process food and vegetables from their own gardens. These include spinach, beans, and cauliflower. On average, farmers do not know that the vegetables they grow have high purine levels. For the cost of their daily life, they always cultivate their own production. most farmers also have a tendency to like to consume coffee and tea drinks that taste sweet with the aim of increasing energy. The high content of fructose in coffee is at risk for increasing the occurrence of gout (Neneng Fitria Ningsih, 2017).

From the results of the study, data was also obtained in the control group. After the examination, the level of uric acid level I had an average of 7,810 mg/dl, decreased to 6,146 mg/dl. uric acid levels are lower than uric acid levels in the stage-II examination. The results of data analysis on the difference in the examination of stages I and II were 1.663 mg/dl using the Paired Sample T-Test, showing the $p\text{-value} = 0.001 < 0.05$, which means that there is a significant difference in the effect of stage I and stage II uric acid levels. The results showed that there was an effect after the second stage of examination with an average of 6.146 mg/dl with the difference in the decrease in uric acid levels of 1.663 mg/dl.

Uric acid is a by-product of the body's production, so its presence can be normal in blood and urine. However, the rest of the protein metabolism of foods containing purines also produces uric acid (Misnadiarly, 2007). Factors from within are the occurrence of metabolic irregularities which are generally associated with these factors, where the age is above 40 years or a high risk of developing gout. In addition, gout can be caused by blood diseases, bone marrow disease, and polycythemia, consumption of drugs, alcohol, obesity, diabetes mellitus can also cause gout (Li et al., 2020)

The results of the analysis using the t-test on systolic pressure and diastolic pressure obtained a p-value of 0.001 ($p < 0.05$), then the effect of wet cupping therapy on reducing the subject's blood pressure after wet cupping therapy was significant. The results of the study by (Adel Galal, 2014) showed that wet cupping therapy could significantly reduce blood pressure. The positive effect given by wet cupping therapy on lowering blood pressure because wet cupping therapy has the benefit of removing all waste and deposits in the arteries of blood associated with blood circulation. Decreased blood pressure also occurs because wet cupping therapy on the skin (cutaneous), under the skin tissue (subcutaneous), fascia, and muscles will cause mast cell damage, due to this damage will release several substances such as Serotonin, histamine, bradykinin, substances that react slow (SRS), and several other substances, these substances will cause dilation of capillaries and arterioles as well as a fire reaction point of wet cupping therapy. Capillary dilatation also occurs in places far from the point of wet cupping therapy, this causes the arterial blood microcirculation to improve, then it will show a relaxing effect on clumsy muscles as well because so will lower blood pressure (Refaat et al, 2014).

Analisa data In this study, the variables measured were uric acid levels before and before cupping therapy. The following will describe each variable in the form of a distribution table as follows:

Table 1. Average Uric Acid Levels Before and Performed Cupping Therapy in the group

Variebel	mean	Std. Deviation	SE	P Value	N
Sebelum	7.160	1.460	0.2667	0.000	30
Sesudah	4.540	0.9261	0.1690	0.000	30

rom table 1, it can be seen that from the results of the study it was found that the average uric acid level of the case group respondents before being treated was 7,160 mg/dl with a standard deviation of 1,460 mg/dl. The respondents after cupping therapy obtained an average uric acid level of 4,540 mg/dl with a standard deviation of 0.9261. It can be seen that the mean difference in uric acid levels between before and after being cupped is 2,620 with a standard deviation of 1,530. The results of statistical tests obtained p-value = 0.000, so it can be concluded that there is a significant difference in average between uric acid levels before cupping therapy and after cupping therapy.

Table 2. Average Uric Acid Levels Before and After Cupping Therapy in the control group

Variable	mean	Std. Deviation	SE	P Value	N
Sebelum	7.810	1.259	0.23001	0.000	30
Sesudah	6.146	1.416	0.25859	0.000	30

From the results of the study, it was found that the average uric acid level of the control group respondents at the time of stage I uric acid level examination was 7,810 mg/dl with a standard deviation of 1,259 mg/dl. On examination of uric acid level II, the average uric acid was 6.146 mg/dl with a standard deviation of 1.416. The difference in uric acid levels between stage I and stage II examinations was 1.663 with a standard deviation of 1.458. The results of statistical tests obtained p-value = 0.000, so it can be said that there is a significant difference between uric acid levels in stage I examinations and stage II examinations (Widodo & Mustofa, 2017).

Uric acid is a by-product of the body's production, so its presence can be normal in blood and urine. However, the rest of the protein metabolism of foods containing purines also produces uric acid (Misnadiarly, 2007). Factors from within are the occurrence of metabolic irregularities, which are generally related to factors, where age is above 40 years or a high risk of developing gout. In addition, gout can be caused by blood diseases, bone marrow disease, and polycythemia, consumption of drugs, alcohol, obesity, diabetes mellitus can also cause gout (Sutriyono et al., 2019).

The researcher showed that after the respondent was given wet cupping therapy, the respondent's uric acid level decreased and the respondent felt more comfortable carrying out daily activities, this shows that wet cupping therapy can provide comfort for the respondent where before being given exercise the respondent felt uncomfortable to carry out activities. daily. The cupping treatment method removes static blood-containing toxins from the human body. Cupping by vacuuming the skin and removing blood from it. This understanding includes two main meanings of cupping, namely the process of vacuuming the skin and the continuation of blood that has been previously vacuumed (Masduki, 2018).

The researcher argues that the main reason for the respondents is that the respondents cannot avoid eating foods that contain purines. In general, uric acid is a waste product of purine metabolism that comes from the food we eat. Purine itself is a substance found in every food ingredient that comes from the body of living things. In other words, in living things there is this purine substance, then because we are living beings, the purine substance moves into our body. Various vegetables and fruits also contain purines. Purines are also caused by the destruction of body cells that occur normally or due to certain diseases (Permatasari, 2018). This study is also in line with the results of research conducted by Hidayaturrofiah entitled "The effect of cupping therapy on uric acid levels in gout sufferers at the Keling I Health Center, Keling District, District. Jepara" 2016. His research has a significant and significant effect, showing that there is an effect of cupping therapy on reducing uric acid levels. Obtained significant P-Value = 0.000 (<0.05). This shows that H1 is accepted, so it can be concluded before there was a difference in uric acid levels and before being given cupping therapy to the respondents (Zainul Arifin, 2017).

4. DISCUSSION

Researchers that wet cupping can be a very effective traditional treatment in healing gout, besides that it does not contain chemicals that are very harmful to the body. Handling gout with wet cupping / non-pharmacological techniques can reduce uric acid levels in the blood, namely, through stimulation of the skin in the form of touch, massage, knife or lancet incisions will cause mast cells to release several cells such as serotonin, histamine, bradykinin, slow-reacting sub attitude (SRS) (Meristian, 2018).

Wet cupping can remove uric acid crystals from the joints and surrounding tissue, so that the pain is reduced and does not become inflammation, redness, or swelling in the joints. Cupping contains prostaglandins from the sore spot, thereby reducing pain. Cupping triggers the secretion of endorphins and enkephalin substances in the body that function as natural pain relievers. If there are other problems in the body, which lead to gout, such as kidney disease, the therapist can help improve the kidney's ability to excrete uric acid crystals in the urine (Hidayaturrofiah, 2016).

Another study on uric acid was also conducted by Agis Taufik, S.Kep with the title Effect on Reduction of Uric Acid Levels in Hypertensive Patients at An-Nahil Clinic, Purwokerto in 2010. This study was pre-experimental with two groups pre-test and post-test without a group design. control. The sampling method is purposive sampling. Statistical analysis used in this study is paired t-test statistical analysis. Uric acid levels before and before cupping therapy were 4.91 and 4.33, respectively. Based on the t-test the difference in uric acid levels in the blood before and before cupping therapy, the t value = 2.46 (p = 0.02) the p-value is smaller than (a = 0.05) this indicates that there is a difference in acid levels urate in the blood before and before cupping therapy significantly.

5. CONCLUSION

From these 5 journal studies, it can be said that wet cupping therapy is able to lower uric acid levels in hyperuricemic patients. Wet cupping can be a very effective traditional treatment in curing gout, besides that it does not contain chemicals that are very harmful to the body. Uric acid is also a product of the body's production, so its presence can be normal in blood and urine. However, the rest of the protein metabolism of foods containing purines also produces uric acid.

From the results of the literature review, it is hoped that it can provide information and can provide knowledge about an easy alternative way to reduce uric acid in the body, one of which is wet cupping and for health workers to develop a program to reduce uric acid levels using non-pharmacological treatment, namely wet cupping (complementary nursing)

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