


Effectiveness Of Layer Leaves In Reducing Uric Acid Levels

Putri Reni¹, Dahlia², Rezky Putri Indarwati Abdullah³

¹Program Studi Pendidikan Profesi Dokter Umum Fakultas Kedokteran UMI, ^{2,3}Dosen Ilmu Kesehatan Masyarakat Fakultas Kedokteran UMI

Article Info	ABSTRACT
Keywords: Syzygium polyanthum, Gout	Gout disease has emerged recently, affecting the majority of people, not only the elderly but also young people. This is based on an unhealthy lifestyle that triggers the emergence of various diseases, one of which is gout. This study aims to determine the effectiveness of consuming boiled water from bay leaves (<i>Syzygium polyanthum</i>) in reducing uric acid levels. This research was carried out by collecting data from various sources, research journals conducted previously. The research results show that boiled bay leaf water can reduce uric acid levels because it contains several compounds such as essential oils, flavonoids and tannins. Flavonoids are secondary metabolite compounds that have the ability to prevent the formation of the xanthine oxidase enzyme. From these results, bay leaves are effective in reducing uric acid levels
This is an open access article under the CC BY-NC license 	Corresponding Author: Putri Reni Program Studi Pendidikan Profesi Dokter Umum Fakultas Kedokteran UMI putrireni608@gmail.com

INTRODUCTION

Gout disease has emerged recently, affecting the majority of people, not only the elderly but also young people. This is based on an unhealthy lifestyle that triggers the emergence of various diseases, one of which is gout. The effects caused by gout are not light so this disease is not a disease that can be taken lightly. Gout can be categorized as a dangerous type of disease if it is not treated and does not receive proper treatment. Improper handling can cause more dangerous effects, requiring both pharmacological and non-pharmacological management (Marlinda, 2019).

The prevalence of gout in the world is 34.2%. The increase in the incidence of gout is not only increasing in developed countries, however, developing countries are also being targeted by an increase in gout sufferers, for example, one of them is Indonesia (WHO, 2013). According to Riskesdas, in 2018 the prevalence of gout in Indonesia was 7.30%. Based on diagnoses from health workers in Indonesia, 4.33% occurred at ages under 34 years, 11.20% at ages 35-64 years, 18.63% at ages 65-74 years, and the highest prevalence occurred at ages ≥ 75 years 18.95%. if examined in terms of age grouping. There are also more gout sufferers in women, as many as (8.46%) compared to gout sufferers in men, namely (6.13%) (Riskesdas, 2018).

The number of gout sufferers in Indonesia is very high, so alternative treatments are needed to deal with the increasing number of gout cases in the future. The alternative

needed is alternative herbal medicine which has minimum side effects on health. One of the herbal treatments is giving bay leaf boiled water, which is a herbal treatment that is very practical and easy to access and is very easy to make and the price is relatively cheap. Bay leaves are often found on the market and are often used as a kitchen spice to add a savory taste to food. Behind its function as a kitchen spice, bay leaves also contain many benefits, such as being able to reduce uric acid levels in the blood if consumed regularly. Bay leaf boiled water can reduce uric acid levels because it contains several compounds such as essential oils, flavonoids and tannins. Flavonoids are secondary metabolite compounds that have the ability to prevent the formation of the xanthine oxidase enzyme. The xanthine oxidase enzyme is an enzyme that has the ability to convert hypoxanthine into xanthine so that it becomes uric acid. The function of flavonoids is to prevent the formation of uric acid (Andriani, 2013).

METHODS

This type of research uses a Narrative Review design. The type of data in this research is secondary data, namely those originating from internationally accredited scientific journals, nationally accredited scientific journals, written citations in the form of research, literature reviews, and case reports from UMI Faculty of Medicine lecturers, Gae, Textbook.

RESULT AND DISCUSSIONS

In research conducted by Meiriza Djohar, Rovi Paramitha regarding giving boiled bay leaves at a dose of 50% (3.9 g of bay leaves) reduced blood uric acid levels by 12.79% in male white mice, while giving boiled bay leaves at a dose of 100%. % (7.8 g of bay leaves) reduced blood uric acid levels by 16.10% in male white mice. And it was concluded that there were differences in uric acid levels in the sample groups of male white mice after being given boiled bay leaves (Djhorari, 2015).

Research conducted by M. Arifki Zainaro DRA, TP, DD, A, MRG, RY regarding the use of bay leaves for gout clients found that non-pharmacological therapy of bay leaf boiled water was proven to reduce uric acid levels in gout sufferers, at the right dose. given 200 cc or 1 glass, drunk 2 times after breaking the fast and at dawn for 7 days. The results of the uric acid level in client 1 before being given therapy were 6.5 mg/dl and after being given therapy for 7 (seven) days, namely 5.3 mg/dl, in client 2 the uric acid level before being given therapy was 7 mg/dl and after being given therapy for 7 (seven) days, namely 5.2 mg/dl, and in 3 clients the uric acid level before being given therapy was 6.8 mg/dl and after being given therapy for 7 (seven) days, namely 5.0 mg /dl. This proves that bay leaf boiled water can be used as an alternative treatment for gout that is cheap, easy and safe, and effective in reducing uric acid levels (Zainaro, 2021).

Research conducted by Dita Maria Virginia using maceration, percolation and soxhletation methods is a good method for extracting bay leaves, especially for obtaining flavonoid compounds. Phytochemical compounds contained in bay leaves include saponins, tannins, triterpenoids, flavonoids, alkaloids and glycosides. Reducing uric acid levels by using bay leaves is influenced by the presence of flavonoids which can inhibit the action of

the hypoxanthine enzyme and has the effect of being a diuretic which helps excrete uric acid through urine. Bay leaves have excellent effectiveness in treating gouty arthritis by reducing uric acid levels in the blood (Efendi, 2017).

In research conducted by Efendi S, the results showed that the combination of bay leaf decoction and ginger had an effect on reducing uric acid levels in gouty arthritis sufferers with an average reduction value of -2.00 mg/dl. The combination of boiled bay leaves and ginger has a greater effect on reducing uric acid levels in male respondents aged 46-55 years. (Efendi, 2017).

In research conducted by Eko Budi Santoso. et al, the uric acid levels of the elderly before giving bay leaf decoction in the treatment group and control group were in the high category (100%). Uric acid levels in the elderly after being given bay leaf decoction in the treatment group mostly had normal uric acid levels (83.3%) and whereas in the control group which was not given bay leaf decoction most of the uric acid levels were high (88.9%). Giving boiled bay leaves to the elderly was effective in reducing uric acid levels in elderly people suffering from gout at the Banyates Community Health Center ($p=0.000 < \alpha$) (Santoso, 2023).

In research conducted by Alwi Safriansyah L, based on the research results, gouty arthritis sufferers were dominated by the late elderly (56-65 years), namely 5 people (41.70%) and predominantly affected women, namely 9 people (75.00%). This research also shows that there is an effect of giving bay leaf boiled water on uric acid levels and pain intensity. So it can be concluded that there is an effect of boiled bay leaves on the treatment of hypertension and gout (Safriansyah, 2023).

In research conducted by Nikka Ardila and Faried Rahman using a Quasi Experimental design method which was carried out using a Pretest - Posttest Control Group Design. The total sample was 30 people, namely 15 intervention groups and 15 people as controls. Univariate and bivariate analysis with the tests used are the Paired T Test and the Independent T Test. Based on the test results, it was found that there was an effect of traditional bay leaf boiled water to reduce uric acid levels in the blood (Aysyah, 2023).

In research conducted by Nurul Hidayah. et al, with 24 test animals used, which were divided into 6 test groups. The division of test animal groups consisted of normal, induction, comparison groups, bay leaf water extract (EADS) at a dose of 50 mg/kg BW, 100 mg/kg BW, and 200 mg/kg BW. The antihyperuricemic effect parameter observed was the blood uric acid level of the test animals. The data obtained was then processed statistically with a 95% confidence interval. The results of the phytochemical screening test show that simplicia and EADS contain tannins, flavonoids, saponins, glycosides and alkaloids. All EADS dose groups showed antihyperuricemic potential that was not significantly different from the comparison group used (Hidayah, 2018).

In research conducted by Pandu Patyawargana, Miftahul Fala, the conclusion of this research was that there was an effect of boiled bay leaves on reducing uric acid levels in elderly people with gouty arthritis. This research suggests that management of reducing uric acid levels in gouty arthritis sufferers can be done by consuming bay leaf decoction which has been proven to have a significant effect (Patyawargana, 2021).

In the research conducted by Palupi Ayundari, a type of quantitative research was used, using an experimental design. The research design used was a "non-equivalent control group design". Based on the results of hypothesis testing using the Paired Sample T-Test, the p-value in the experimental group was 0.002 (0.05). There was a significant decrease in uric acid levels in prolanis patients between before and after being given bay leaf extract. There is an effect of giving bay leaf extract on uric acid levels in Iman Clinic prolanis patients. (Tarigan, 2023)

In research conducted by Pramukti Dian.S, et al, using experimental research, namely assessing the provision of boiled bay leaf water to reduce uric acid levels using a Quasi Experimental Design approach using the Non Equivalent Control Group. The sampling method in this research is using a non-probability sampling technique, namely Purposive Sampling. The total obtained was 36 respondents. Give boiled water from bay leaves for 3 days. Based on the Wilcoxon test, the Asymp value was obtained. Sig. amounting to $0.001 < 0.05$, meaning that there is an effect of giving bay leaf boiled water on reducing uric acid levels in gout sufferers in Kadisoro Gilangharjo Hamlet, Pandak, Bantul, DIY. Based on the results of the analysis regarding giving boiled bay leaf water to reduce uric acid levels in gout sufferers in Kadisoro Hamlet, Gilangharjo Village, Pandak, Bantul, DIY, after drinking bay leaf boiled water, uric acid levels decreased. (Setyaningrum, 2019).

In the research conducted by Nadia Sari, et al, they used a true experiment with a pre and post test control group design approach and a sample size of 30 respondents was divided into 3 groups using a simple random sampling technique, then acupressure was given at the Hegu and Taixi points with a duration of 5 minutes and Bay leaf extract dose of 1 gram for 12 days of treatment. Uric acid levels decreased in the intervention group, control 1 and control 2. However, based on the Anova test on the uric acid level variable, it showed that the intervention group was the most effective in reducing the value (1.98 ± 0.53) in the control group 1 (0.95 ± 0.28) and control group 2 (1.17 ± 0.28) with a significant value of uric acid levels ($p = 0.000$). The most effective group for reducing uric acid levels in complementary nursing interventions was acupressure treatment and bay leaf extract in the intervention group (Nadya, 2022).

In research conducted by Vechya Z.LP, et al, an experimental research design was used, with a pre-experimental approach. The sample with the sampling technique used the total sampling method with a total sample of 16 respondents. Results using the dependent t test with a significance level of 95%, obtained a p-value of 0.000 which is smaller than the significant value of 0.05 ($0.00 < 0.05$). In conclusion, the results of this study show that there is an effect of giving boiled bay leaves on reducing uric acid levels in gouty arthritis sufferers in the working area of the Ranotana Weru Community Health Center, Manado. The results of this research showed that by consuming boiled bay leaves regularly and according to the recommended dose, namely 200 ml or 1 glass of water boiled with bay leaves drunk once a day, it can reduce uric acid levels in gouty arthritis sufferers (Ndede, 2019).

In research conducted by Githa Darisa, et al, using the paired t-test statistical test, it showed that the average value of uric acid levels before being given boiled bay leaves was

7,070, while the average value of uric acid levels after being given boiled bay leaves was 4,930. From the mean results before and after, the difference in value was 2.14 from a total of 20 respondents. P-value= 0.000 (Ramadani, 2011).

CONCLUSION

Based on several literature that has been reviewed and analyzed, it can be concluded that the application of bay leaf decoction is effective in reducing uric acid levels because bay leaves have diuretic properties so that they increase the production of urine which will be excreted from the body due to metabolic waste and can reduce acid levels. veins in the blood. This bay leaf decoction is also effective in reducing uric acid levels in elderly people who suffer from gout because it contains chemicals in the form of flavonoids, tannins, polyphenols, essential oils, vitamin B and vitamin C.

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