

The Effect Of Warm Ginger Compress On Reducing Gout Arthritis Pain In The Elderly

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Abstract. Background: Gout arthritis (gout) is a disease that arises due to excessive blooduric acid levels, which causes excessive blood uric acid levels, namely theproduction of uric acid in the body more than its disposal, besides that the causeof excessive uric acid production in the body can occur due to genetic factors (congenital), food factors. Complaints of gout arthritis pain vary from mild, moderate to severe. One of the non-pharmacological therapies that can be used to relieve gout arthritis pain is warm ginger compresses. This study aims to see the effect of warm ginger compresses on the gout arthritis pain scale. Methods: This research is a type of pre-experimental research, namely experimental research without a control group. The research was conducted with a one group pre-posttest design. Sampling using total sampling technique. Results: The resultsof the Friedman test showed a P value (0.000). The results of this study indicate that warm ginger compresses can reduce gout arthritis pain. Conclusion: There is a significant effect on the level of gout arthritis pain before and after the warmginger compress intervention

Keywords: Gout Arthritis, Pain, Warm Ginger Compress

INTRODUCTION

Gout arthritis is a condition brought on by high blood uric acid levels. High blood uric acid levels are caused by the body producing more uric acid than it is able to eliminate. In addition, the body can produce excessive amounts of uric acid due to dietary and genetic factors (congenital). Men experience gout arthritis more frequently than women. Renal insufficiency and abnormalities of purine metabolism are linked to the highest occurrence of gout in the older population. Pain, swelling, and indications of inflammation in the big toe's metatarsal-phalangeal joint (also known as podagra) are common complaints of gouty arthritis. According to prevalence estimates, 6.1% of men and 8.5% of women get gouty arthritis (Badan Penelitian dan Pengembangan Kesehatan RI, 2018).

According to the World Health Organization (2017), 34.2% of people worldwide suffer from gouty arthritis. Gout arthritis is common in developed nations like the United States. Not just in wealthy nations is the incidence of gout arthritis on the rise. But developing nations also saw an uptick, with Indonesia being one among them (Dehlin et al., 2020). According to

Riskesdas (2018) in Indonesia the prevalence of gout at the age of 55-64 years is 15.5%, the age of 65-74 years is 18.6%, the age of ≥ 75 years is 18.9%. This figure shows that pain due to gout has greatly disrupted the activities of Indonesian people. According to Riskesdas (2018) in Central Java, the prevalence of gout at the age of ≥ 75 years is 6.78%. While in Sragen Regency itself the prevalence of gout is 6.14%.

Excess urate molecules in the body, whether from excessive synthesis, inadequate excretion, or increased purine intake, as well as decreased uric acid excretion from other medical conditions or drug use, are some of the causes that contribute to the pain associated with gouty arthritis. If crystals of monosodium urate monohydrate accumulate in the surrounding tissues and joints, problems will result. These needle-shaped crystals generate an inflammatory response that, if left unchecked, will lead to excruciating pain, which is frequently associated with gout attacks. Crystal deposits will seriously harm joints and soft tissues if treatment is not received (Lutfiani & Badhowy, 2022). The occurrence of gout arthritis is also influenced by age, gender, and lifestyle choices. The recommended way of living includes diet, exercise, smoking, and drinking alcohol. In addition to inherited causes, stress, smoking, and environmental variables can also trigger gout arthritis (Anita et al., 2020).

Gout, which is defined by elevated uric acid levels in the body or hyperuricemia, is a condition that frequently affects the elderly. Using both pharmaceutical and non-pharmacological treatments can help lessen the intensity of gout pain. Using analgesic medications, such as nonsteroidal anti-inflammatory medicines (NSAIDs) and anti-inflammatory pharmaceuticals, to reduce pain is known as pharmacological therapy. On the other hand, applying warm compress therapy utilizing ginger is a non-pharmacological activity (Generation, 2020). The physiological reactions of the body can regulate thick blood, relax muscles, balance tissue metabolism, raise tissue permeability, promote comfort, and lessen anxiety in areas where warm ginger compresses would induce heat (Nur Amalia et al., 2021).

Research conducted by (Anita et al., 2020) aims to examine the effect of giving warm compresses using grated red ginger (*Zinger Officinale Roscoe Var Rubrum*) on reducing pain scales in patients with gouty arthritis, respondents as many as 25 people with complaints of joint pain due to gouty arthritis at the Guna Budi Bakti Medan Foundation Nursing Home in 2020. This study reported that there was a decrease in the pain scale of respondents pre-test (before) giving warm compresses using grated red ginger from 25 respondents, before doing the majority of 14 respondents (56%) experiencing severe pain, and after giving warm

compresses using grated red ginger with the majority of respondents having a mild pain scale of 17 respondents (68%).

From these data, it shows that there is an effect of giving warm compresses of grated red ginger on reducing the scale of pain in gouty arthritis pasien. Another study conducted by (Saifah, 2018) aimed to examine the effect of warm compresses of red ginger boiled water on complaints of joint diseases. In this study before doing most (93.3%) patients experienced moderate pain and as many as 63.3% of respondents stated less pain after the intervention and no more severe pain. Before the intervention, a small percentage (16.7%) decreased range of motion and all patients experienced increased range of motion and almost all (99%) experienced mild sensations in the joints. Based on the Wilcoxon test, it can be seen that there are significant differences in pain intensity, duration of pain and quality/sensation of joint pain before and after treatment.

From the results of a preliminary study conducted by researchers, data obtained from the Masaran II health center, especially for the elderly in Masaran Sragen Village in 2023, showed that there were 49 elderly people suffering from gouty arthritis with high uric acid levels with a range of uric acid levels of 8.7-16 mg / dl. The results of interviews from 5 elderly people found complaints that were often felt, namely pain, especially in the joints of the hands, feet and knees, patients with gouty arthritis did not consume pharmacological therapy types of anti-inflammatory drugs. Many of the elderly take precautions by simply avoiding foods such as red meat, offal and nuts. The elderly also do not know about warm ginger compresses against reducing the scale of arthritis gout pain.

RESEARCH METHOD(S)

The type of research used by researchers is a pre-experimental design with a one-group pre-posttest design. The design of this study emphasizes initial observation before conducting the intervention stage. New, followed by post test or final observation (Donsu, 2016). The population in this study was the elderly who experienced gout arthritis. Based on data from Puskesmas II Masaran Sragen, data on the elderly who experienced gout arthritis were obtained as many as 49 people.

SAMPLE: Inclusion criteria Elderly experience moderate joint pain on a scale of 4-6
Elderly with uric acid levels above normal limits Elderly willing to be respondents Elderly able

to communicate well Not taking anti-inflammatory drugs Elderly aged 60-74 years Elderly gout arthritis with uric acid levels for men > 8.5 mg / dl , women > 8.0 mg / dl

Exclusion Criteria

Elderly who are physically ill Elderly who have ginger allergy Elderly who use analgetic drugs and other pain relievers. The sampling technique used is total sampling, which is a sampling technique where all members of the population are sampled all. This research was carried out after obtaining a research permit from Masaran Sragen Village. This research will be conducted in June-July 2023.

In this study the instruments used are: Numeric rating scale of pain intensity According to (Kadek Riyandi et al., 2017) that the Numeric rating scale of pain intensity is used to measure the level of pain felt by clients. The Numeric rating scale is used to measure the level of pain felt by the client. This scale is horizontal in shape showing the numbers 0-10 i.e. 0 indicates no pain and 10 indicates severe uncontrolled pain. Scale 0= no pain, scale 1-3= mild pain, scale 4-6= moderate pain, scale 7-9 = controlled severe pain, scale 10= severe pain uncontrolled.

This assessment was conducted through interviews with observation sheets to respondents regarding the first pain scale before treatment and to determine changes in pain scale during the warm ginger compress process and after giving warm ginger compresses. The purpose of using this instrument is to determine the effect of giving warm ginger compresses on changes in the scale of gout pain before and after treatment.

On this pain measurement scale, validity tests were not carried out because it had been patented by Smeltzer, S.C bare B.G (2014). The instrument observation sheet used by researchers on the independent variable is a standard SOP from the study (Rusnoto, Noor C, 2018) and on the dependent variable is an observation sheet measuring pain scale using the Numeric rating scale. This therapy is performed on gout atritis pain clients for 20 minutes every afternoon.

Data analysis is an activity carried out after data from all respondents or other data sources have been collected. The analysis used is a computer tool through the Statistical Package Of Social Sciences program. Univariate analysis is performed to describe the characteristic variables of age, occupation, sex, education level, uric acid value, pain. The results of measuring the pain scale before and after warm ginger compresses were analyzed using a descriptive test. A descriptive statistic test is a type of research used to identify the

characteristics of a population. However, Bivariate analysis to determine the difference or difference between before and after warm ginger compresses.

FINDINGS AND DUSCUSSION

Tabel 1 Distribution of characteristics of respondents

No	Denografi Data	F	%
1.	Age		
	60-74 th	49	100.0%
	Total		
2.	Sex		
	Man	12	24.5%
	Woman	37	75.5%
	Total	49	
3.	Job		
	IRT	18	36.7%
	Farmer	13	26.5%
	Labor	18	36.7%
	Total	49	100.0%
4.	Education Level		89.8%
	SD	44	10.2%
	SMP	5	
	Total	49	100.0%
	Uric Acid Value		
	8-8,9	46	93.9%
	>9	3	6.1%
	Total	49	100.0%
	Data 2023	N = 49	100.0%

Based on the results of the study in table 1, the characteristics of respondents based on the average age of respondents in the range of 60-74 years were 49 people (100.0%). The gender of respondents was mostly female 37 people (75.5%) and at least male 12 people (24.5%). The employment of IRT respondents and workers was 18 people each (36.7%) and the lowest was 13 farmers (26.5%). The majority of the education rate of SD respondents is 44 people (89.8%). The majority of respondents uric acid scores were 8-8.9, which was 46 people (93.9%).

Arthritis gout pain scale before warm ginger compresses on the first to third day

Tabel 2 Pretest arthritis gout pain scale

Pretest	F	%
Day 1		
4-6 = moderate pain	49	100.0%
Total	49	100.0%
Day 2		
1-3 = mild pain	2	4.1%
4-6 = moderate pain	47	95.9%
Total	49	100.0%
Day 3		
1-3 = mild pain	44	89.8%
4-6 = moderate pain	5	10.2%
Total	49	100.0%
Data 2023	N= 49	100.0%

Based on table 2, all respondents had a pain scale of 4-6 (moderate pain). On the second day, the majority of respondents had a pain scale of 4-6 (moderate pain), which was 47 people (95.9%). On the third day, the majority of respondents had a pain scale of 1-3 (mild pain), which was 44 people (89.8%).

Arthritis gout pain scale after warm ginger compresses on the first to third day.

Table 3 Posttest arthritis gout pain scale

Posttest	F	%
Day 1		
1-3 = mild pain	3	6.1%
4-6 = moderate pain	46	93.9%
Total	49	100%
Hari 2		
1-3 = mild pain	34	69.4%
4-6 = moderate pain	15	30.6%
Total	49	100.0%
Hari 3		
0 = painless	9	18.4%
1-3 = mild pain	40	81.6%
Total	49	100.0%
Data 2023	N= 49	100.0%

Based on table 3, all respondents had a first-day pain scale of 4-6 (moderate pain). On the second day, the majority of respondents had a pain scale of 1-3 (mild pain), which was 34 people (69.4%). On the third day, the majority of respondents had a pain scale of 1-3 (mild

pain), which was 40 people (81.6%), and there were even respondents who had a pain scale of 0 (no pain), which was 9 people.

Bivariate Analysis

Normality Test

Before conducting data analysis, researchers first conduct a normality test to find out whether the data is normally distributed or not so that it can be determined for data testing with parametric or non-parametric methods. In this study, the normality test used the Shapiro Wilk test because the number of samples <50 people was 49 people. To find out the normality value of the arthritis gouty pain scale can be seen in table 4.4

Table 4. Normality Test

Shapiro-Wilk	
	Sig.
PreTest	,000
First day posttest	,000
Posttest day two	,000
Third day posttest	,000

Table 4.explains that the results of the normality test that has been performed using Shapiro-Wilk sig values from the first day to the third day pretest-posttest show a sig value of <0.05 which means that the data is abnormally distributed.

The effect of giving warm ginger compresses on the arthritis gout pain scale

The results of warm ginger compress intervention carried out for 3 consecutive days using the Friedman Test can be seen from table 4.5.

Table 5 Friedman Test Test Warm Ginger Compress

	N	Mean	Std.Deviation	(Min- Max)	Sig
PreTest	49	5,45	,580	(4-6)	
First day posttest	49	4,49	,681	(3-6)	0,000
Posttest day two	49	3,18	,635	(2-4)	
Third day posttest	49	1,10	,714	(0-3)	

Table us5ing the Friedman Test to compare arthritis gout pain scales before and after a warm ginger compress intervention found that Ho was rejected and Ha was accepted with a P value of 0.000 or <0.05. This means that there is a significant difference between the arthritis gout pain scale before and after the warm ginger compress intervention. Thus it can be said that warm ginger compresses have an impact on decreasing the scale of arthritis gout pain

CONCLUSION AND RECOMMENDATION

Based on the results of a study conducted with a sample of 49 respondents regarding warm ginger compresses on reducing arthritis gout pain in the elderly in Masaran Sragen Village, it can be concluded that:

The majority of respondents aged 60-74 years were 49 people (100.0%). By gender, the majority are women, 37 people (75.5%). The majority of respondents have IRT jobs and 18 workers (36.7%). The majority of respondents had an elementary education level of 44 people (89.8%). Based on the value of uric acid, the majority of respondents were 8-8.9, namely as many as 46 people (93.9%). Before giving the intervention warm ginger compress, respondents experienced arthritis gout pain with a moderate pain scale (4-6). After administering a warm ginger compress intervention for 3 days, respondents experienced arthritis gout pain with a mild pain scale (1-3). There was a significant effect on the level of arthritis gout pain before and after the intervention of warm ginger compresses with a P value (0.000).

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