

## RED GINGER COMPRESS TO TREAT JOINT PAIN IN ELDERLY PATIENTS WITH GOUT

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### Abstract

Gout Arthritis is caused by the accumulation of uric acid in the joints of the body. When there is excess uric acid in the bloodstream and the amount is more than can be excreted, the uric acid seeps into the joint tissue, causing pain and swelling. The purpose of this study was to analyze the effectiveness of compresses with grated red ginger to overcome joint pain in elderly patients with gout. The research design used one group pre-test-post-test, with the aim of determining the effect of compresses with grated red ginger to overcome joint pain in elderly patients with gout. The data collection instrument used an observation sheet in the pretest and post-test. The number of respondents in this study was 75 respondents. From the research data, it was found that there were 8 respondents with mild pain, 16 respondents with moderate pain and 51 respondents who felt severe pain. Based on the results of statistical tests using paired sample t-tests or paired tests obtained a p-value = 0.000, because the p-value <0.05, there is a relationship between the decrease before and after giving compresses with grated red ginger to overcome joint pain in elderly patients with gout in the Siulak Gedang Health Center work area in 2024. It is recommended for gout sufferers to compress ginger solution at home using simple tools that are affordable for all levels of society, and this action is an alternative way to reduce pain.

**Keywords:** Red Ginger Compress, Pain, Gout.

### 1. INTRODUCTION

Gout Arthritis is caused by the accumulation of uric acid in the joints of the body. When there is excess uric acid in the bloodstream and the amount is more than can be excreted, the uric acid seeps into the joint tissue causing pain and swelling. Pain is the most common symptom of Gout.

Gout Arthritis is usually most common in the joints of the big toe, ankle joints, foot joints, knee joints and elbow joints which can cause pain that is inflamed due to the accumulation of purine substances which can form crystals that cause pain. If the pain experienced is not treated immediately it will result in disruption to daily physical activities such as decreased physical activity (Radharani, 2020).

Based on data from the World Health Organization (WHO) in 2016 in Jaliana, 2018 the prevalence of gout in the United States is around 13.6 cases per 1000 men and 6.4 cases per 1000 women. Normal uric acid levels according to WHO in adult men are around 2-7.7 mg/dl, while in adult women it is 2-6.5 mg/dl. Based on research (Dalimarta, 2010), in Indonesia gout ranks second after osteoarthritis. When viewed from age characteristics, the highest prevalence is at age ≥ 75 years (54.8%). There are also more female sufferers (27.5%) compared to men (21.8%). Prevalence of gout sufferers the highest is in Bali which reaches 19.3%. North pharmacological. Sulawesi is also one of the highest prevalences of gout sufferers, reaching 10.3% (Suryani, 2021).

In Jambi Province, based on data from the Jambi Provincial Health Office in 2019, the number of gout sufferers was recorded at 14,203 people. Of that number, around 60% were men and around 40% were women. The prevalence of gout in Jambi Province is also influenced by unhealthy lifestyle and

diet factors, as well as genetic and age factors. Gout increases with age, and it is estimated that around 10% of the elderly population in Indonesia suffers from gout (Sandra, 2023).

In the Siulak Gedang Health Center Work Area, data was obtained from the December 2023 report, cases of Muscle and Connective Tissue Diseases ranked first with a total of 321 visits with the addition of 31 new cases. When viewed from the data in the last four months, cases of Muscle and Tissue Diseases were most often found in October with a total of 375 visits with the addition of 38 new cases (Siulak Gedang Monthly Report Data 2023). From the results of the initial survey conducted by researchers at the Siulak Gedang Health Center, researchers can conclude that cases of Muscle and Tissue Diseases are still very high so that a study is needed that can reduce these cases. Pharmacological therapy is the act of administering analgesic drugs such as antiinflammatory drugs and non-steroidal antiinflammatory drugs (NSAIDs) as pain relievers, while administering red ginger compress therapy is a nonpharmacological action (Ilham, 2020).

The occurrence of uric acid is the breakdown of purines in the body and is usually eliminated through urine. However, when uric acid production is too much or when the kidneys cannot remove uric acid effectively, uric acid will build up in the body and cause a condition known as hyperuricemia or increased levels of uric acid in the blood. Gout sufferers usually experience symptoms of severe joint pain, especially in the joints of the toes, knees, wrists, and elbows. In addition, gout sufferers are also at risk of experiencing other health problems such as heart disease, stroke, and diabetes (Sandra, 2023).

Pain is an unpleasant sensory and emotional experience resulting from subjective tissue damage. Sensory complaints expressed as aches, pains, aches, and so on can be considered as modalities of pain. Pain is a symptom often experienced by people with thalassemia and dyspepsia. Thalassemia will be seen after the patient enters the initial symptoms, such as weakness, dizziness, and pain in the stomach. While dyspepsia is characterized by the appearance of pain in the upper abdomen (Wati, 2022).

Problems that can occur if pain is not resolved include affecting daily behavior and activities, characterized by the client often grimacing, frowning, biting the forehead, biting the lip, being restless, immobilized, experiencing muscle tension, making movements to protect body parts and avoiding conversation, avoiding social contact, and only focusing on pain relief activities, clients participate less in routine activities, such as having difficulty in carrying out normal hygiene activities and can interfere with social activities and sexual relations (Wati, 2022).

Elderly is someone who has reached 60 years and above. Elderly is not a disease, but a process that gradually results in cumulative changes, is a process of decreasing the body's resistance in dealing with stimuli from within and outside the body, as in Law No. 13 of 1998 which states that the implementation of national development aimed at realizing a just and prosperous society based on Pancasila and the 1945 Constitution, has resulted in social conditions that are increasingly improving and life expectancy is increasing, so that the number of elderly people is increasing. Many of the elderly are still productive and able to play an active role in community, national and state life. Efforts to improve the social welfare of the elderly are essentially the preservation of religious and cultural values of the nation (Rosiska, 2025).

Non-pharmacological actions for gout arthritis sufferers include compresses, both warm compresses and cold compresses. Compresses are independent actions of nurses in an effort to lower body temperature. Red ginger is commonly used as a mixture of medicinal ingredients. This is because the pharmacological effect of red ginger can strengthen the efficacy of other ingredients mixed as herbal concoctions (Suparlan, 2023).

## 2. RESEARCH METHODOLOGY

The design in this study was a pre-experimental one group pre-test–post-test, with the aim to be achieved is to determine the effect of applying compresses with grated ginger to overcome joint pain in elderly patients with gout. The data collection instrument used was an observation sheet in the pretest and posttest (Afrioza,2023).

A sample is part of a population or representative of a population studied and taken as a data source and can represent the entire population or a sample is part of the number and characteristics possessed by the population (Asrulla, 2023). The sampling of this study was gout sufferers in the Siulak Gedang Health Center work area in 2024 using purposive sampling where all members of the population have an equal opportunity to be selected as research samples. From field research data, 75 samples were found to be used as research data sources.

The Numerical Scale Method (NRS) is based on a 1-10 scale that represents the quality of pain experienced by the patient. NRS is said to be easy to understand and more effective in detecting the cause of acute pain than VAS and VRS (Verizarie, 2020). NRS pain scale:



Source: medicalnewstoday.com

**Figure 1. Numeric Rating Scale**

In performing the ginger compress process to reduce pain, it takes 100 grams of grated red ginger, 500 cc of warm water at a temperature of 40 degrees Celsius. Place the grated red ginger on the painful area for 20 minutes twice, namely in the morning and evening. Inclusion criteria are criteria where the research subjects represent research samples that meet the following requirements: a) Middle-aged elderly in the Siulak Gedang Health Center work area. b) Able and understand reading and writing. c) Willing to be respondents d) Elderly with age >60 years who experience gout complaints for Male gender >7 mg/dL and Female >6 mg/dL. e) Elderly who do not consume gout medication.

### 3. RESEARCH RESULTS

The Average Pain Scale Before Giving Compresses With Grated Red Ginger To Overcome Joint Pain In Elderly Patients With Gout In The Siulak Gedang Health Center Work Area In 2024 Is Known.

#### 3.1 Table 1 Average Pain Scale Before Giving Compresses With Grated Red Ginger To Overcome Joint Pain In Elderly Patients With Gout In The Siulak Gedang Health Center Work Area In 2024.

Scale Painful Before Compress	n	Mean	Min	Max
Scale Painful Preset	75	3.58	3	4,33

From the table above it can be seen that The average pain scale after compressing with grated red ginger to overcome joint pain in elderly patients with gout was 2.47. The lowest pain value was 1.67 and the highest pain value was 4.33. It is known that the average pain scale after giving compresses

with grated ginger Red To Treat Joint Pain In Elderly Patients With Gout In The Siulak Gedang Health Center Work Area In 2024.

**3.2 Table 2 Average Pain Scale After Giving Compresses With Grated Red Ginger To Overcome Joint Pain In Elderly Patients With Gout In The Siulak Gedang Health Center Work Area In 2024**

Scale	Painful	After	n	Mean	Min	Max
Compress						
Scale Painful	Preset		75	2.47	1.67	3.33

From the table above it can be seen that The average pain scale after compressing with grated red ginger to overcome joint pain in elderly patients with gout was 2.47. The lowest pain value was 1.67 and the highest pain value was 3.33.

From this study, a bivariate analysis was conducted to determine the effect of ginger compress therapy on pain levels in the Siulak Gedang Health Center work area in 2024. A paired sample t-test was first conducted to know the difference between before and after treatment.

**3.3 Table 3 Effect of Compression With Grated Red Ginger For Treating Joint Pain in Elderly Patients With Gout in Work Area Siulak Gedang Health Center in 2024**

Scale	Painful	n	Flat-flat	Std. Mean	P-Value
				Error	
Pretest		75	3.58		
Posttest		75	2.47	0.085	0.000

From the table above, it can be seen that the average value of respondents who were given boiled ginger water with a pain scale using the paired sample t-test showed that there was a difference in the average intensity of pain in the pre-test.

3.58 and the average posttest score is 2.47. So It can be concluded that the pretest pain scale decreased with an average difference of 0.085 and a significant level of P-value = 0.000 ( $p < 0.05$ ), so there is an effect of decreasing the pain scale after compressing with grated red ginger to overcome joint pain in elderly patients with gout.

#### 4. CONCLUSION

In accordance with the purpose of this study, namely to determine the relationship between the decrease before and after giving compresses with grated red ginger to overcome joint pain in elderly patients with gout in the Siulak Gedang Health Center work area in 2024 with a total of 16 respondents, it can be concluded that:

1. The average pain scale before compressing with grated red ginger to overcome joint pain in elderly patients with gout was 3.58. The lowest pain value was 3 and the highest pain value was 4.33.

2. The average pain scale after compressing with grated red ginger to overcome joint pain in elderly patients with gout is 2.47. The lowest pain value is 1.67 and the highest pain value is 3.33.
3. From the results of the paired sample t test, it is known that there is a difference in the average pretest pain intensity of 3.58 and the average posttest value of 2.47. So it can be concluded that the pretest pain scale decreased with an average difference of 0.085 and a significant level of P-value = 0.000 (p <0.05), so there is an effect of decreasing the pain scale after compressing with grated red ginger to treat joint pain in elderly patients with gout.

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