



THE EFFECT OF WARM RED GINGER COMPRESSES ON JOINT PAIN IN THE ELDERLY WITH GOUT

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ABSTRACT	Keywords
<p>The elderly go through the aging process, which will lose resistance to infection with the accumulation of degenerative diseases and also the accumulation of uric acid. The elderly with increased uric acid will experience repeated joint pain because the precipitate of monosodium urate crystals accumulated in the joints. One of the treatments of joint pain in addition to pharmacological therapy there are also non-pharmacological therapies that can reduce side effects, affordable, easy to get and easy to do, namely one of the natural ingredients that are suitable for causing warm sensations, one of which is red ginger. Red ginger reduces pain due to the content of gingerol and shangoal which add heat to warm compresses, besides that the skilooiginase content in red ginger is able to inhibit prostaglandins to deliver pain. The purpose of this research to knowing the effect of red ginger warm compresses on changes in joint pain in elderly with gout. This study is a pre-experimental with One-Group Pre-Post test design. The population of this research is all elderly gout who joint pain at the Posyandu for the Elderly of Bagor Kulon Village, who has 20 people. The sample of this study was 20 respondents with the total sampling technique in the Posyandu for the Elderly of Bagor Kulon Village, for 3 days. Measurement of the pain was Visual Analogue Scale (VAS) was given before and after the patients were given warm red ginger compresses. The analyzed data was Paired Samples t-test. The results obtained p value 0.000 so an Effect of Red Ginger Warm Compresses On changes in Joint pain in elderly gout. Red ginger warm compresses can be used as a non-pharmacological therapy in reducing gouty arthritis in the elderly.</p>	<p>Red Ginger Warm Compresses, Joint Pain, Elderly Gout</p>

INTRODUCTION

People with gout in the world are 34.2%. The prevalence of uric acid is high in developed and developing countries, one of which is Indonesia (Lenert, 2018). The age of gout sufferers in Indonesia under 34 years is 32% and over 34 years is 68% (Faiza, 2018). The elderly go through the aging process, which will lose resistance to infection by accumulating degenerative

diseases and also the illness the elderly is gout. Gout is a illness characterized by pain that occurs repeatedly caused by deposits of monosodium urate crystals that collect in the joints as a result of high levels of uric acid in the blood (Radharani, 2020). Pain that is felt in the joint area and does not receive proper treatment will affect the comfort of the body and will have an impact on decreasing activity (immobilization). Elderly with joint

diseases such as gouty arthritis will complain of joint stiffness in the morning with limited movement and muscle pain, cramps or spasms. Pain is often felt in the soles of the feet, ankles, knees, elbows, and wrists (Putri, Rahmayanti, & Diana, 2017).

Joint pain will result in decreased activity in the elderly and prolonged immobilization. Limitations in movement and reduced joint use will worsen the condition of the musculoskeletal system due to the disease process. Pain that occurs in the elderly will have physiological effects such as increased respiration rate, peripheral vasoconstriction, increased blood sugar, increased muscle strength, decreased GI motility, pupil dilation, pale face, rapid breathing, verbal statements (crying, snoring, grimacing, biting lips, etc.) restlessness, immobilization, muscle tension, increased hand movement, decreased social contact/interaction (focus on pain, avoids conversation) In the elderly tend to suppress the pain they experience, because they think pain is a natural thing that they have to live with and they are afraid of experiencing pain. serious illness or death if pain is examined (Perry, 2005).

One of the joint pain treatments besides pharmacological therapy there is also non-pharmacological therapy that can reduce side effects, is affordable, easy to obtain and easy to do, namely one natural ingredient that is suitable for causing a warm sensation, one of which is red ginger. One of the joint pain treatments besides pharmacological therapy there is also non-pharmacological therapy that can reduce side effects, is affordable, easy to obtain and easy to do, namely one natural ingredient that is suitable for causing a warm sensation, one of which is red ginger. to reduce pain because the content of gingerol and shangoal which adds a sense of heat to warm compresses, besides the content of skilooginase in red ginger is able to inhibit prostaglandins to deliver pain. A warm compress of red ginger contains gingerol which can inhibit the formation of prostaglandins as a pain mediator that acts at the transduction stage, so that it can reduce pain (Izza, 2014). The use of this red ginger

warm compress is given once each therapy is carried out for 15-20 minutes.

MATERIALS AND METHOD

This study at the Posyandu for the Elderly of Bagor Kulon Village, Bagor District, Nganjuk Regency, for 3 days at 13th – 15th September 2022. The population of this research is all elderly gout who joint pain at the Posyandu for the Elderly of Bagor Kulon Village, who has 20 people. The research sample consisted of 20 of elderly gout who joint pain at the Posyandu for the Elderly of Bagor Kulon Village. The sampling technique used is total sampling.

This study is a pre-experimental with One-Group Pre-Post test design. The respondent gets a warm red ginger compresses. Warm red ginger compresses are made by pounding red ginger then affixing it to the joints that have joint pain then wrapping it using gauze for 15-20 minutes, done once a day for 3 days. Monitoring was carried every day, which visiting respondent and measurement of pain at respondent's home.

A pain was collected by measurement observation sheet. Instrument used to measure pain was Visual Analogue Scale (VAS). The Visual Analogue Scale (VAS) was given before and after the respondent were given warm red ginger compresses. Visual Analogue Scale (VAS) is one of the pain rating scales. VAS has reliability 0.71 in patient with chronic musculoskeletal pain and the correlation orientations of VAS is 0.99, so VAS has sufficient reliability. The data were analyzed using SPSS 21 with Paired Samples test because the pain data in this research had normal data distribution.

This study ethics uses inform consent, autonomy, confidentiality, beneficent, non-maleficent, justice and fidelity. Research ethics was carried out at the health research ethics committee Institute Of Health Science STRADA Indonesia.

RESULTS

Characteristics of respondents included age, gender, education and profetion and long suffered.

Based on table 1, the elderly gout ranging from 60-74 years are 12 respondent (60%). Almost all respondents are woman are 13 respondent (65%) and no school are 12 respondent (60%). Most sufferers work as farmer are 8 respondent (40%) and long suffered 0-1 years are 8 respondent (40%).

Table 1. Characteristics of respondents (n=20)

Variable	n	%
Age		
60-74 Years	12	60,0
75-90 Years	8	40,0
Gender		
Man	7	35,0
Woman	13	65,0
Education		
No school	12	60,0
Elementary School	5	25,0
Middle School	2	10,0
High School	1	5,0
Profetion		
Housewife	7	35,0
Farmer	8	40,0
Trader	5	25,0
Long Suffered		
0-1 Years	8	40,0
1-2 Years	7	35,0
2-3 Years	5	25,0

Table 2. The Pain Pre and Post Warm Red Ginger Compresses (n=20)

Pain	n	Mean	Std.Dev	p-value
Pain Pre	20	7,20	1,361	0,000
Pain Post		3,15	1,309	

Based on table 2, The statistical test result shows that there is the pain before and after Warm Red Ginger Compresses

provided in 3 days. The result of Paired Samples t-test p-value 0,000.

DISCUSSION

The research elderly gout mostly gender woman. Woman who have menopause and enter old age experience a decrease in the hormone estrogen, resulting in an imbalance of osteoblast and osteoclast activity which results in a decrease in trabecular and cortical bone mass, causing thin, hollow bones, joint stiffness, exfoliation of joint cartilage and thus causing bone loss. there will be pain in the joints. If pain is not treated it will increase the feeling of discomfort and can interfere with the activities of elderly women. At the time before given warm red ginger compress therapy, elderly women felt pain and stiffness in painful joints, especially in the morning Kawiyana (Siki, 2009).

Red ginger is composed of hundreds of active chemical compounds. These compounds are known to have certain properties for the body. Phenol compounds have been shown to have anti-inflammatory effects and are known to be effective in eliminating joint disease and muscle tension (Feri, 2016). Red ginger is used to reduce gout pain because it contains gingeron and shogaol. Physiological stages of pain, a warm compress of red ginger contains gingerol which can inhibit the formation of prostaglandins as a pain mediator that acts at the transduction stage, so that it can reduce pain. The active substance of red ginger from oleoresin which consists of gingerol, shogaol, and zingeberence is a homolog of phenol through the heating process. Heat degradation of gingerols into gingerone, shoagol and other compounds is formed by heating dry and fresh rhizomes. The pungent smell of ginger is due to its main compound, a ketone, namely zingeron. The content in red ginger is able to add a sense of heat to the compress, the heat given from the water-soluble oleoresin is able to produce an effective warm compress (Izza, 2014).

Red ginger compress is a combination of warm therapy and relaxation therapy which can provide benefits for people with joint pain. The content of red

ginger is much higher than other types of ginger such as the content of essential oils and aerosols so it is very good for making medicinal ingredients. Red ginger itself has pharmacological and physiological effects such as providing heat, anti-inflammatory, analgesic, antitumor antioxidant, antimicrobial, antidiabetic, antiobesity, and antiemetic effects (Rahmani, et al., 2014). In addition to providing a hot effect, ginger also has a spicy effect where this heat causes vasodilation of blood vessels, muscle spasms and relieves pain (Pratintya, Harmilah, & Subroto, 2012).

CONCLUSIONS

Red ginger contains zingeron or shagaol as well as essential oils that have ingredients that can reduce joint pain. So that the red ginger warm compress is effective for non-pharmacological treatment. Red ginger compresses will be more optimal if accompanied by pharmacological therapy.

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