The Difference Effectiveness Between Ginger Stew Compress And Warm Water Compress To Decrease Pain Scale In Rheumatoid Arthritis In Kenconorejo Village , Batang Regency

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Abstract

Background: Elderly is the age stage were facing physical and mental health problems. The problem that often happens is a joint disease, one of them is rheumatoid arthritis. Elderly with rheumatoid arthritis will experience inflammation that causes pain. Management of rheumatoid arthritis pain there is two, that is pharmacology and nonpharmacology management. One of the non-pharmacological management is a warm water compress and warm compresses of ginger stew. Objective: To determine the difference in the effectiveness of warm compresses of ginger stew and warm water compresses to decrease the scale of pain in elderly with rheumatoid arthritis. Research Method: The research design in this research was quasi-experimental with pretest design and posttest nonequivalent control group design. The population in this study was 44patients with rheumatoid arthritis in Kenconorejo Village. The sample was 24 respondents with purposive sampling technique. This research was conducted in May-June 2018. The instrument in this study used pain observation sheets with the intensity of numerical pain 1-10.Paired T-test and Mann Whitney test were used in this study. Results: The average decrease of pain scale in the warm water compress group was 0.3 and the mean decrease of pain scale in the warm ginger stew compress group was 2. Different results using the Mann whitney test obtained a significance value of 0.0000 (p <0,05) which means there is a significant difference between warm compress ginger stew and warm water compresses to decrease the scale of pain. Conclusion: warm compound ginger stew is more effective than compressing warm water in lowering the pain scale.

Keywords: Pain, warm compress ginger stew, Rheumatoid Arthritis, Elderly, warm water compress.

Introduction

Elderly is a stage of age which faces special physical and mental health problems. Seven health problems that often occur in the elderly include arthritis, hypertension, hearing loss, cardiac abnormalities, chronic sinusitis, decreased vision and bone disorders. The Elderly National Commission said that most diseases suffered by the elderly were joint disease (52.3%) and also a cause of disability in the elderly. One joint disease that often occurs in the elderly is rheumatoid arthritis (MOH, 2013).

Pain in patients with rheumatoid arthritis occurs in the synovial part of joints, tendons, and the bursa will be thickened due to inflammation followed by bone erosion and bone damage around the joints that can cause disability (Singh et al., 2015). According to the American College Of Rheumatology (2013) states that as many as 52.5 million or about 23% of the adult population of the United States suffer from rheumatoid arthritis. In addition to the world, Indonesia has also experienced an increase in the incidence of rheumatoid arthritis. Based on Riskesdas data in 2013, the prevalence of rheumatoid arthritis patients reached 24.7% of the total population in Indonesia. Data from the Riskesdas in 2013 also found data that in Central Java, the prevalence of joint diseases including rheumatoid arthritis reached 25.5%.

According to the data from the Writing Health Center of Batang Regency in Central Java Province (2017), the number of elderly with rheumatoid arthritis was 1,119 sufferers. Rheumatoid arthritis is ranked sixth out of the top ten non-communicable diseases in the work area of the health center. Kenconorejo Village is one of the villages in Tulis Subdistrict, Batang Regency with a total number of rheumatoid arthritis sufferers in January-April 2018 totaling 44 patients from a total number of elderly aged> 60 years as many as 207 in 2017 based on data from the auxiliary health center of Kenconorejo Village.

Generally, management of rheumatoid arthritis pain is two of them, that are

pharmacological management that uses drugs and non-pharmacology. In non-pharmacological interventions, nurses play a major role in pain relief because it is an independent act of nurses (Syamsiah, 2015). warm compress manipulation technique is a one of Non-pharmacological pain management. Warm compresses can provide a physiological effect which increases the relaxation of the movement of muscles and joints. (Therkleson, 2014).

Ginger is included in WHO's priority list as the most widely used medicinal plant in the world. If warm water compresses collaborate with ginger, it will accelerate the decrease in complaints of joint pain experienced by patients with rheumatoid arthritis. Ginger also has pharmacological effects, namely hot and spicy taste, where this heat can relieve pain, stiffness, and muscle spasm or the occurrence of vasodilation of blood vessels (Masyhurosydi et al., 2013).

Based on the above phenomenon and data on the number of patients with rheumatoid arthritis in Kenconorejo Village, Tulis Subdistrict, Batang Regency, researchers are interested in conducting research with the title "Differences in Effectiveness of Giving Warm Ginger and Warm Water Compresses on Decreasing the Rheumatoid Arthritis Pain Scale in Kenconorejo Village , Tulis Subdistrict, Batang Regency "

Methods

The research design used in this study was quasi-experimental with a pre-test and post-test non equivalent control group design. The population in this study, were all the people of Kenconorejo Village, Tulis Subdistrict, Batang Regency who had been diagnosed by the Sub-District Health Center of Kenconorejo Village in the work area of Tulis Health Center suffering from 2018 rheumatoid arthritis, totaling 44 patients from January to March 2018. In this study the number of samples needed is 12 respondents for the control group and 12 respondents for the experimental group by considering inclusion and exclusion criteria. This study does not use the instrument reliability validity test. The measurement aspects of this study used pain observation sheets with the intensity of numerical pain 1-10. The interventions given in 3 days with asking the permission of the respondent. the compress applied once a day for 30 minutes.

Results

The results of research conducted for 2 weeks on 1-14 May 2018 in Kenconorejo Village, Batang Regency to 24 respondents giving warm compresses of ginger stew to the treatment group and warm water compresses in the control group for 3 days with a duration of 30 minutes at each meeting times and measure the scale of pain before a warm compress of ginger decoction and after 3 days after applying warm water compresses. The results of the study is elaborated in 2 parts, as a bellow:

1. Univariat analysis
   a. Demographic data
      1) Characteristics of respondents based on gender, education and employment

Table 1.1 Characteristics of Respondents by Gender, Education, Employment in Kenconorejo Village, Kecamata Tulis, Batang Regency in 2018

Characteristics of Respondents	Frequency (f)	Percentage (%)
Gender		
Male	5	20,8
Female	19	79,2
Total	24	100
Education		
Elemnatary School	13	54,2
uneducated	11	45,8
Total	24	100
Occupation		
Farmer	9	37,5
entrepreneur	1	4,2
Unemployement	14	58,3
Total	24	100

Based on the table above obtained data about the sex of the respondents. The results showed that the highest number of elderly respondents with rheumatoid arthritis were women with nineten people

(70.2%) and five men (20.8%). The highest level of education for elderly respondents with rheumatoid arthritis is SD, 13 people. Most older adult with rheumatoid arthritis do not work, amounting to 14 people. Characteristics based on age

Table 1.2 Average Age of espondents in Kenconorejo Village,Tulis Subdistrict, Batang Regency in 2018

Frequency	Min	Max	Mean
24	60	88	68,25

Based on the table above obtained data about the age of the respondent. The results showed that the minimum age of respondents in this study was 60 years, and the maximum age was 88 years, with an average value of 68.25 years.

b. The average value of the scale of elderly joint pain scale before and after being given a warm water compress (control group)

Table 1.3 The average value of the elderly joint pain scale before and after being given a warm water compress (control group) in Kenconorejo Village, Tulis Subdistrict - Batang Regency in 2018 (n = 12)

	Frequency	Min	Max	Mean
Pre Test	12	2	7	4,16
Post Test	12	1	7	3,75

Based on the table above, it can be seen that the scale of the pain of the respondent's joints before warm water compresses is a minimum value of 2 and the maximum value is 7 with an average value of 4.16, while the scale of joint pain after applying warm water compresses is 1 and the maximum value is 7 with an average value of 3.75.

c. The average value of the scale of pain in the elderly before and after being given a warm compress of ginger decoction (treatment group)

Table 1.4 The average value of the elderly joint pain scale before and after being given warm ginger decoction (treatment group) in

Kenconorejo Village, Tulis Subdistrict, Batang Regency in 2018 (n = 12)

	Frequency	Min	Max	Mean
Pre Test	12	2	6	4,08
Post Test	12	1	4	2,08

Based on the table above, it can be seen that the scale of respondent's joint pain before the administration of ginger decoction warm compresses has a minimum value of 2 and the maximum value is 6 with an average value of 4.08, while the scale of joint pain after giving ginger stew warm compresses is a minimum value of 1 and the maximum value is 4 with an average value of 2.08.

2. Bivariate analysis
   a. Paired t-test

Table 1.6 Differences in the scale of pain before and after being given warm compresses of ginger stew and warm water compresses in the Batang Kenconorejo Village in 2018 (n = 24)

Group		N	Mean	P-value
Experimental	pretest	12	4,08	0,000
	posttest	12	2,08	
Control	pretest	12	4,16	0,017
	posttest	12	3,75	

Based on Table 1.6 the results showed that the average pretest in the treatment group was 4.08 and posttest 2.08 while the average pretest in the control group was 4.16 and posttest 3.75 with p-value in the treatment group 0,000 and the control group was 0.017 where <0.05, so that there can be a significant difference.

   b. Mann Whitney

Table 1.7 Comparison of pain reduction between the treatment and control groups (Mann Whitney Test) in Kenconorejo Village, Tulis Subdistrict, Batang Regency in 2018.

Group	Frekuensi Pre-Post	Post Test	P-Value
Intervention	12	2,08	0,006
Control	12	3,75	

Based on the above table, the Mann Whitney test results obtained p-value 0.006 (p <0.05), with the average posttest value in the treatment group was 2.08 and in the control group 3.75 where the posttest pain scale in the treatment group decreased greater than the control group. So it can be concluded that there are differences in the decrease in pain scores that are significant between the treatment group and the control group.

Discussion

In this study the lowest sample age was 60 years, and the highest was 88 years, old with an average age of 68.25 years. Along with the increase in age, there is a decline in physiological functions, so that the elderly have a higher risk of experiencing pain caused by several pathological conditions. Occupation characteristics in this study sample were 58.3% not working, 37.5% farmers, and 4.2% self-employed. The characteristics of women more affected by rheumatoid arthritis compared to men, in this study the number of samples who experienced rheumatoid arthritis pain was dominated by women with a percentage of women 79.2% and men 20.8%. Joint pain tends to be suffered more by women three times more often than men because women who have experienced menopause and enter old age experience hormonal imbalances which can lead to a decrease in bone mass so that it can cause pain (Wiedya, 2013).

The lowest value of pain scale in the elderly before warm compresses is 2, the highest value 7 with an average value of 4.16 while the lowest value after being given a warm water compress is 1 and the highest value is 7 with an average value of 3.75. For the treatment group of warm compresses, the lowest value of ginger stew before being given a warm compress of ginger stew is 2 and the highest value is 6 with an average value of 4.08, after being given a warm compress of ginger stew the lowest value is 1 and the highest is 4 with an average value of 2.08. Thus it can be seen that the scale of pain after a warm compress of ginger decoction is reduced compared to the scale of pain after a warm water compress.

After a warm compress of ginger stew is done 2 and the average decrease in the scale of pain after a warm water compress is 0.3 with the value of the Mann whitney test significance p-value 0.0000 (p <0.05) then there is a difference in effectiveness between the treatment group and control group to decrease the intensity of pain experienced by respondents.

In this study, assuming that, compressing warm water and warm compresses of ginger decoction reduces pain by giving a warm sensation to the joint area that is experiencing pain. Warm water compresses use a medium of warm water to reduce pain, while warm compresses of ginger stew use ginger that has been pounded and preheated together with water. The process of decreasing the intensity of the pain scale is faster using warm ginger decoction compresses than using warm water compresses because ginger has heat properties that can provide a warm feeling that has several effects, including the effects of vasodilation, increased permeability of capillaries increasing cellular metabolism, relaxing muscles, and increasing flow blood.

This is in line with the research conducted by Zuriati (2017), where for the control group the average scale of pain before being given warm water compresses was 6.75, the lowest value was 5 and the highest 9, after being given warm compresses the average value of pain scale was 5 , 58, with the lowest score of 4 and the highest score of 7 with an average number of decreases in pain 1.167. for the treatment group on average pain scale before being given a warm ginger compress was 6.75, the lowest value was 5 and the highest was 9, after being given a warm ginger compress the average pain scale was 4.75, the lowest score was 3 and the highest was 7 with an average decrease in pain 2 This proves that giving ginger compresses is more effective in reducing pain.

Conclusion

Based on the results of the research, then some conclusions are presented with the following description:

a. There is the effect of giving ginger stew warm compresses to the decrease in the intensity of the pain scale in the elderly with rheumatoid arthritis with the results of the significance of the test paired t test 0,000 (<p-value 0.05).

b. There is the effect of giving warm water compresses to the decrease in the intensity of the pain scale in the elderly with rheumatoid arthritis with significant results of paired t-test 0.017 (<p-value 0.05).

c. Warm compresses of ginger decoction were more effective in decreasing the intensity of scal pain in the elderly with rheumatoid arthritis with the results of the significance of the Mann Whitney test 0.006 (<p-value 0.05).

Recomendations

The results of this study can be used as additional information for respondents who experience rheumatoid arthritis pain, so that people can use warm ginger decoction compresses to overcome joint pain as a non-pharmacological therapy that can help reduce the intensity of the pain scale.

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