NURSING CARE FOR ELDERLY PEOPLE WITH GOUTY ARTHRITIS USING RED GINGER WARM COMPRESSES TO REDUCE CHRONIC PAIN IN THE VILLAGE OF PAGARUYUNG

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Abstract

One of the metabolic disorders commonly experienced by the elderly is gouty arthritis or uric acid. Gout arthritis or uric acid is a metabolic disease characterized by acute joint inflammation caused by the formation of crystallized uric acid. This disease is classified based on diagnosis and patient complaints, including pain accompanied by redness, swelling, and stiffness in the joints. This study aims to determine the effectiveness of red ginger compresses in reducing joint pain in the elderly. A descriptive research method with a case study approach to nursing care was used in the management of clients with joint pain, including assessment, nursing diagnosis, nursing intervention implementation, and evaluation. Sampling was conducted using purposive sampling techniques within the community of Pagaruyung Village, Tapung District. Two respondents were given red ginger warm compress therapy for 3 days with a frequency of once a day for 15-20 minutes. This application was used to measure pain levels using the Numeric Rating Scale (NRS). Measurements were taken before and after the test. The study results showed that there was a change in the pain scale before and after the warm compress therapy, both in the first and second respondents. Warm ginger compress therapy can reduce joint pain in the elderly. Therefore, warm ginger compresses can be an alternative treatment that patients can do independently to reduce pain due to gouty arthritis.
Keyword: Gout Arthritis 1; Warm Compress 2; Red Ginger 3;.

INTRODUCTION

According to the World Health Organization (WHO), elderly individuals are those aged 60 years and above. The aging process is associated with progressive physiological changes that lead to decreased organ function and metabolic alterations. One of the metabolic disorders commonly experienced by the elderly is gouty arthritis. Gouty arthritis is a metabolic disease characterized by the accumulation of uric acid crystals in the joints, resulting in acute or chronic inflammation, pain, swelling, redness, and joint stiffness. [1].Gouty arthritis is a disease that attacks the joints. It is a metabolic disease in which the body cannot control uric acid, causing a buildup of uric acid that causes pain in the bones and joints. It is often experienced by most elderly people [2].The prevalence of gouty arthritis increases with age and is more commonly found in elderly populations due to decreased renal excretion of uric acid, dietary factors, and reduced physical activity. Chronic joint pain caused by gouty arthritis can significantly impair mobility, daily activities, sleep quality, and overall quality of life in elderly individuals. If not properly managed, persistent pain may lead to physical disability, psychological distress, and increased dependence on others[3].

One of the symptoms experienced by gout arthritis sufferers is joint and bone pain. Management of gout arthritis can be done using pharmacological and non-pharmacological

techniques. Pharmacological therapy commonly involves the use of analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), or uric acid–lowering agents. However, long-term use of pharmacological therapy in the elderly may cause side effects such as gastrointestinal disturbances, renal impairment, and cardiovascular risks. Therefore, non-pharmacological interventions are increasingly recommended as complementary therapies in nursing care to enhance comfort and minimize adverse effects [4].One non-pharmacological technique that can relieve pain is the red ginger warm compress technique by umat et al[5]. One non-pharmacological intervention that has been shown to be effective in reducing joint pain is warm compress therapy using red ginger (Zingiber officinale var. rubrum). Red ginger contains active compounds such as gingerol, shogaol, and zingerone, which have anti-inflammatory and analgesic properties. These compounds are known to inhibit prostaglandin synthesis, thereby reducing inflammation and pain. The application of warm compresses also promotes vasodilation, improves blood circulation, reduces muscle stiffness, and enhances relaxation[6]. Applying a warm red ginger compress is an easy way to relieve joint pain caused by high uric acid levels. Using ginger with a compress technique using warm water can be done for 15-20 minutes and is quite effective in relieving pain. Ginger compresses have been proven to be more effective in reducing pain intensity than compresses using only warm water. Ginger contains Olerasin or Zingerol which can inhibit prostaglandin synthesis, thereby reducing pain or inflammation. Prostaglandin itself is a chemical compound in the body that acts as a chemical mediator causing pain from inflammation [7].

Treatment for elderly people with gouty arthritis is urgently needed. Pharmacological therapy can use anti-inflammatory drugs, while non-pharmacological therapy can use therapies that help relieve pain. Applying a warm ginger compress is one therapy that can be applied in nursing care to relieve pain and aim to increase comfort in patients suffering from gout arthritis.

RESEARCH METHODS

The Evidence-Based Nursing Practice (EBN) method used was the application of red ginger warm compresses on elderly people to relieve pain caused by gouty arthritis.The nursing care process is carried out in the management of clients with joint pain, including assessment, diagnosis of nursing care, nursing interventions implementation, and evaluation. This method used a case study design with two elderly subjects with gouty arthritis who were willing to undergo the intervention.This application measures the level of pain using the Numeric Rating Scale (NRS). If the pain scale score is 0: no pain, pain scale score 1-3: mild pain, pain scale score 4-6: moderate pain, pain scale score 7-9: controlled severe pain, pain scale score 10: unbearable severe pain. This pain scale measurement is conducted pre- and post-test.

The materials and tools used in the implementation of Evidence-Based Nursing (EBN) were red ginger as the main ingredient and washcloths as compresses. The implementation procedure began with an initial assessment to determine which patients met the criteria, followed by explaining the intervention procedure to the patients. After the initial stage, the implementation stage begins by preparing the tools and materials by washing the ginger without peeling the skin, then cutting the ginger into small pieces and boiling it until it comes to a boil. Then mix it with 1 liter of water in an open bucket until the temperature reaches 45°C.

Position the patient comfortably, measure the uric acid level in the blood, and apply a compress to the painful area according to the attached SOP. After the implementation stage, the final stage is to record the intervention results on the observation sheet and schedule the next meeting, which will be held in 3 days.

RESEARCH RESULTS

The results of the assessment conducted on October 18, 2025, obtained data from one respondent, Mr. N, aged 68 years old, male, suffering from joint pain for one year, pain felt during activities, alert and oriented, pain described as sharp and stabbing, pain in the knee joints, the client appeared grimacing while holding the knee, blood pressure: 161/90 mmHg, respiratory rate: 21 breaths per minute, pulse rate: 98 beats per minute, temperature: 36.5°C. The client has a history of joint pain for one year. The pain score on the NRS scale was calculated for the client before nursing intervention for pain management, with a pain score of 6.

The results of the assessment conducted on October 18, 2025, obtained data from the second respondent, Mr. M, 71 years old, male, suffering from joint pain for a year, pain felt during activity, compos mentis, a stabbing pain, pain in the knee joints, the client grimaces while holding his knees, blood pressure: 155/93 mmHg, respiratory rate: 20x/minute, pulse rate: 87x/minute, temperature: 36.2oC. The client has a four-year history of joint pain. The client's NRS pain score before receiving pain management nursing intervention was 5.

The nursing diagnosis that emerged in both respondents was chronic pain associated with chronic musculoskeletal conditions (D.0078). The nursing interventions provided were pain management, the stages of administration included identification of the location, characteristics, duration, frequency, quality, intensity of pain, identification of pain, identification of factors that aggravate and alleviate pain, provide nonpharmacological techniques to reduce pain (TENS, hypnosis, acupressure, music therapy, biofeedback, massage therapy, aromatherapy, guided imagery techniques, hot/cold compresses, play therapy), explain the cause, period, and triggers pain, explain pain relief strategies, recommend self- monitoring of pain, teach non-pharmacological techniques to reduce pain, collaborate on analgesic administration if necessary [8].

The implementation was carried out once a day for 15-20 minutes for 3 days. The second respondent was measured using the Numeric Rating Scale (NRS) pain assessment. After measurement and administration, red ginger warm compress therapy was given to reduce joint pain. The target of therapy administration for these two respondents was joint pain.

Based on the evaluation of Figure 1 and Figure 2, there was a decrease in the pain scale after the nursing intervention of red ginger warm compress therapy. In respondent 1, the post-test data showed a pain scale score of 3, which means mild pain. Then, in respondent 2, the post- test data showed a pain scale score of 2, which means mild pain. The pain scale scores decreased after both respondents were given the EBNP nursing intervention of warm ginger compress therapy. Thus, the administration of warm ginger compress therapy is effective in reducing joint pain.

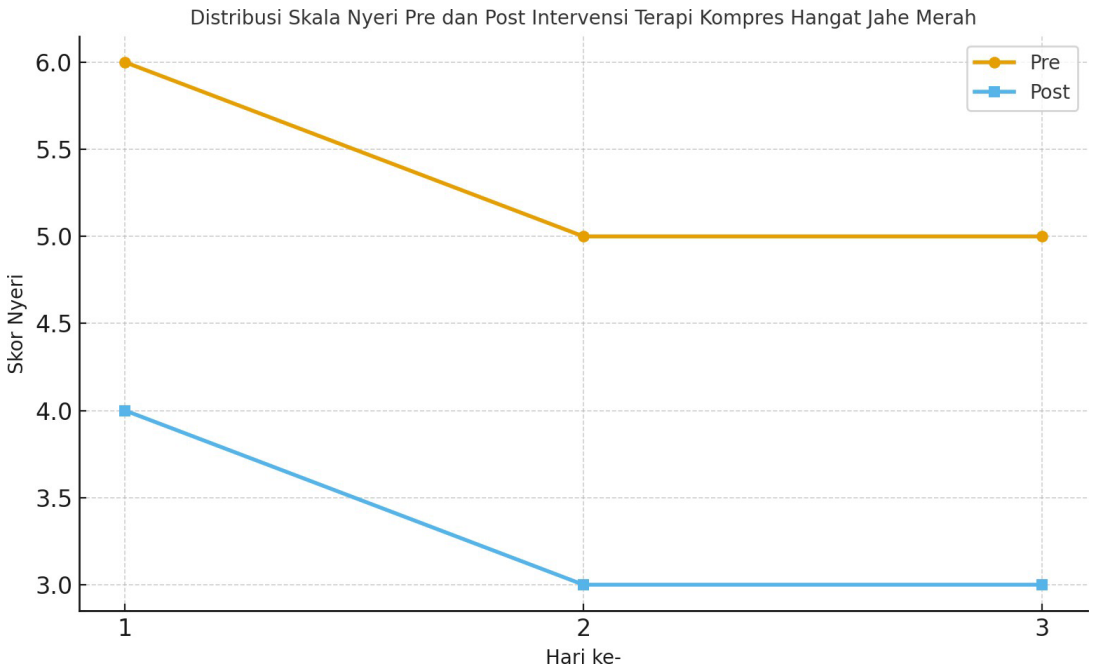

Figure 1
Evaluation of Figure 1 Data Distribution Comparison of Pain Scale Pre- and Post-Intervention Warm Compress Therapy Red Ginger on Mr. N

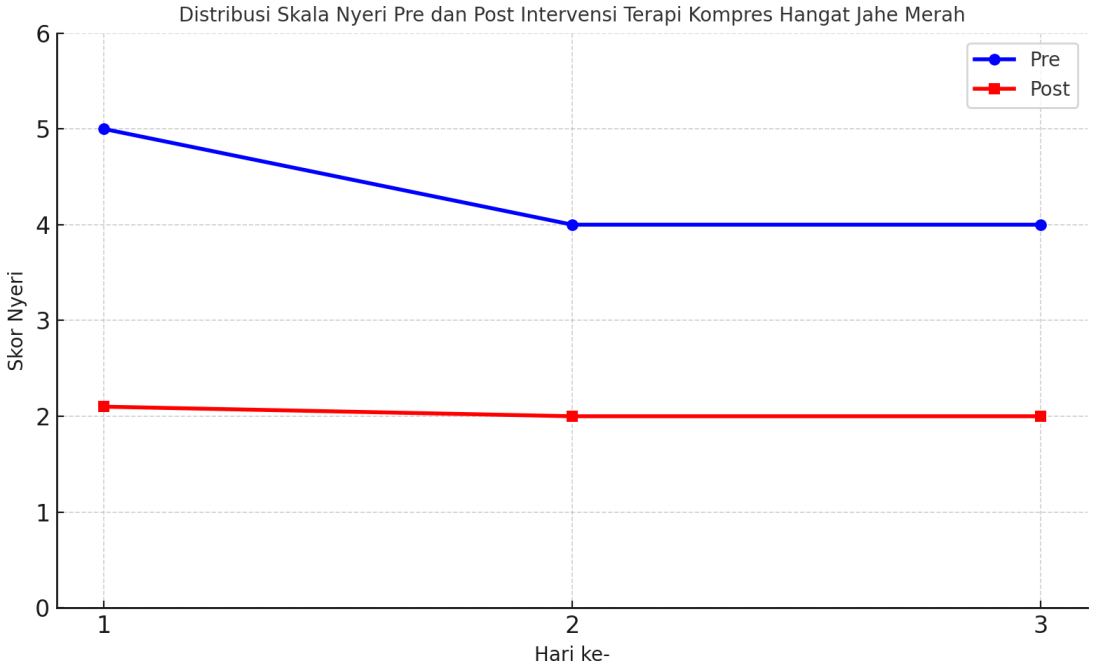

Figure 2
Evaluation of Figure 1 Data Distribution Comparison of Pain Scale Pre- and Post-Intervention Warm Compress Therapy Red Ginger on Mr. M.

DISCUSSION

Based on the results of the case study, there were two male elderly respondents, one aged 68 and the other aged 71. These ages fall into the elderly category. As age increases, so does the risk of joint injury. Joint pain is a disease that can be caused by various factors, including genetics, allergic reactions, and infections, as well as the aging process. It is often known as joint disease and is most commonly found, with its prevalence increasing with age by Nursalam[9]. This statement is also supported by other researchers who suggest that changes in the elderly due to the decline in body systems and increasing age will cause changes such as in collagen and elastin connective tissue, as well as a decrease in cartilage ability, resulting in reduced bone density and changes in muscle structure, leading to a decrease in joint elasticity and causing joint pain [10].

Joint pain can be caused by thickened cartilage that begins to thin progressively. Cartilage functions as a cushion between bones and joints. Cartilage begins to thin due to constant friction between the ends of the bones that make up the joint. This repeated friction can cause joint inflammation [11].

The key data found in both respondents included: both respondents had a history of joint pain. Both respondents complained of knee joint pain and when assessed, both clients appeared to be grimacing while holding their knees. The age of respondent 1 was 68 years and respondent 2 was 71 years. The results of this study are in line with research conducted. Data shows that the majority of respondents with joint pain are aged 60-74 years. This is explained by the fact that age significantly increases the risk of joint pain. As age increases, the immune system and bodily resistance also decline.

The nursing problem in this case study is chronic pain associated with chronic musculoskeletal conditions (D.0078). Another case study was also presented by Istianah, Windi Kurnia Lestari, Hapipah, Supriyadi, Nurul Hidayati, [12] also formulated the same nursing diagnosis of chronic pain associated with chronic musculoskeletal conditions. This aligns with the theoretic concept explained in the SDKI, which states that chronic pain is associated with chronic musculoskeletal conditions [13].

The nursing action plan given to both respondents based on the nursing diagnosis of pain management (I.08238) includes: identification of the location, characteristics, duration, frequency, quality, and intensity of pain; identification of pain; identification of factors that exacerbate and alleviate pain, provide non pharmacological techniques to reduce pain (TENS, hypnosis, acupressure, music therapy, biofeedback, massage therapy, aromatherapy, guided imagery techniques, hot/cold compresses, play therapy), explain the causes, periods, and triggers of pain, explain pain relief strategies, recommend self-monitoring of pain, teach non-pharmacological techniques to reduce pain, collaborate on the administration of analgesics if necessary (SIKI PPNI, 2018). The researcher used a non-pharmacological nursing intervention, namely red ginger warm compress therapy, to reduce joint pain. The treatment was administered to both respondents by washing 5 ginger rhizomes and slicing them thinly, then placing the slices in 1 liter of boiling water the ginger slices until boiling, pour the ginger decoction into a basin, wait until the temperature reaches 45°C, the ginger decoction is ready for use, adjust to a comfortable position, wash hands, take a washcloth, soak it in the ginger decoction then squeeze slightly, apply it to the painful area until the warmth of the washcloth diminishes, repeat steps 6, 7, and 8 for 10-15 minutes. This is in line with research conducted by Sulistiyana et al[14] .It is said that non-pharmacological treatments such as compresses on

painful joints using ginger are the first choice for reducing joint pain in elderly people with gout (gouty arthritis).

Red ginger has many properties, one of which is its anti-inflammatory effect, which can be used as a medicine for inflammation and to reduce pain caused by gout. This anti-inflammatory effect is caused by active components consisting of gingerol and jingeron, which can inhibit leukotrienes and prostaglandins, based on the results of research conducted by Wijaya et al., [15]. This aligns with research conducted by Yuniarti [16], which states that warm red ginger compresses can alleviate pain in gout patients or joint pain because they contain numerous compounds, including red ginger essential oil, which contains several compounds such as shogaol, zingerone, and gingerol.

The implementation in this case study was conducted over 3 days with a frequency of 1 time/day for 15-20 minutes, with each respondent receiving the same red ginger warm compress therapy. After the treatment was given to both respondents, the clients appeared relaxed and more comfortable.Evaluation of this therapy revealed that respondent 1 had a pain scale of 6 in the moderate pain category before receiving therapy, and after receiving therapy, the pain scale decreased to 3 in the mild pain category. Meanwhile, respondent 2 had a pain scale of 5 in the moderate pain category before receiving therapy, and after receiving therapy, the pain scale decreased to 2 in the mild pain category by Anggraini et al[17].

The results of the study in both cases above show that the administration of red ginger warm compress therapy can reduce joint pain in the elderly using the Numeric Rating Scale (NRS) calculation Rating Scale (NRS). These study results align with other studies indicating that the application of warm ginger compress therapy can reduce joint pain in the elderly, meaning that warm ginger compress therapy is more effective in reducing joint pain [18].

CONCLUSION

Study results after intervention with warm ginger compress therapy administered for 3 days once a day for 15-20 minutes, using the Numeric Rating Scale (NRS): after implementing the intervention on both respondents to reduce joint pain, respondent 1 and respondent 2 had a pain scale of 3 and 2, respectively, indicating mild pain. Based on the results of the two respondents above, the researcher concluded that the application of warm ginger compress therapy was effective in reducing joint pain in the elderly.

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