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APPLYING A RED GRATED GINGER COMPRESS TO REDUCE LOW BACK PAIN

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ABSTRACT

Background: Low Back Pain (LBP) is pain in the lower back area, from below the ribs to the tailbone. In general, lower back pain is caused by various problems in the musculoskeletal system. Non-pharmacological measures that can be taken are using grated red ginger compresses, because the gingerol substance and the warm sensation it causes can help widen blood vessels and improve blood circulation, so that pain is reduced. Based on data from the Medical Records Installation of Dr. Sardjito General Hospital Yogyakarta, in 2024 there were 185 cases of patients experiencing LBP. Objective: To describe the application of grated red ginger compresses to reduce the pain scale in LBP patients in the Anggrek 2 Ward of Dr. Sardjito General Hospital Yogyakarta. Method: Descriptive with a case study approach using 1 LBP patient who experienced pain. Results: After applying grated red ginger compresses for 20 minutes with a frequency of 2 times in 6 days, the pain scale decreased from 6 (moderate pain) to 1 (very mild pain). Conclusion: Grated red ginger compress therapy is effective in reducing pain in patients with low back pain from moderate to mild. Recommendation: This is expected to serve as a reference source or alternative therapy for pain reduction in patients with low back pain using grated red ginger compresses.

INTRODUCTION

Low back pain (LBP) is pain felt in the area below the ribs to the upper buttocks (Ningsih & Hakim, 2022). The main causes of LBP are generally mechanical, including injuries to the spine, intervertebral discs, and surrounding soft tissues. Degenerative processes such as osteoarthritis and osteoporosis also contribute. Risk factors for LBP include excessive physical activity, stress, heavy lifting, obesity, and prolonged sitting (Cahya et al., 2021). LBP is rarely fatal, but its pain reduces back flexibility, interferes with daily activities and social interactions, and can lead to disability, thus reducing quality of life (Yudiansyah & Bustam, 2023).

According to WHO data, (2022), LBP is a major contributor to the overall burden of musculoskeletal conditions. Approximately 7.4% of the 570 million children (YLDs) worldwide are diagnosed with LBP, with 90% of the most common cases being non-specific LBP. Data from the Kemenkes RI, (2021) indicates that the prevalence of LBP in Indonesia in 2021 was 12,914, or 3.71%. In Yogyakarta, the prevalence of LBP, based on the Yogyakarta Basic Health Research Riskesdas Yogyakarta (2019), was 9.14%. According to data obtained from the Medical Records Installation at Dr. Sardjito General Hospital, in 2024 there were 185 cases of LBP, with 50 cases in the Anggrek 2 Ward. Between January 2025 and February 2025, there were 19 cases of LBP.

The primary complaint among LBP sufferers is lower back pain (Ginting et al., 2021). In addition to pharmacological measures using analgesics, grated ginger can be used as a non-pharmacological method to reduce pain. Traditionally, ginger has been used medicinally to treat various ailments, including rheumatism, stroke, toothache, diabetes, muscle pain, sore throat, cramps, high blood pressure, nausea, fever, headaches, and others (Hikmah Murni et al., 2024). Common types of ginger found in Indonesia include elephant ginger, red ginger, and emprit ginger, with red ginger considered the most effective for pain relief. Red ginger contains 52% starch and 3.9% essential oils, and has a bitter, spicy taste and a distinctive aroma derived from olerasin compounds such as gingerol,

zingerone, and shogaol, which have anti-inflammatory, antioxidant, and analgesic properties, thus suppressing prostaglandins and relieving muscle pain (Sari et al., 2022).

This is supported by the research results of Irfanudin & Suparmanto, (2022)entitled "The Effect of Red Ginger (Zingiber Officinale Var Rubrum) Compress Therapy on Lower Back Pain in Factory Employees" the results of the study showed that red ginger (zingiber officinale varrubrum) compress therapy had an effect on lower back pain in factory employees with a pretest value of 5 and a posttest value of 0. The results of the Wilcoxon test showed that the p value was 0.000 <0.05.

RESEARCH METHODS

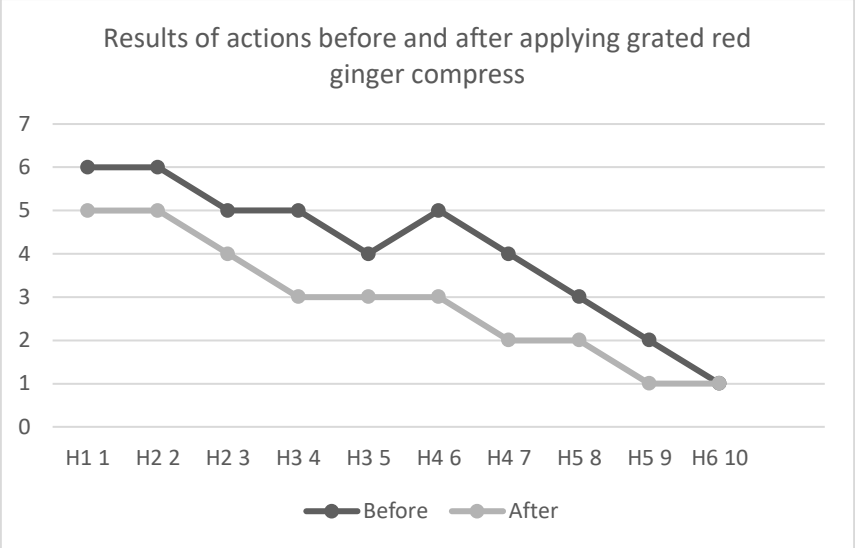
The method used is a descriptive method to obtain an overview by conducting observations, interviews and analyzing accurate data with a focus on applying grated red ginger compresses to LBP patients. This study used one respondent who met the inclusion criteria. The grated red ginger compress intervention was carried out for 20 minutes with a frequency of 2 times in 6 days. Before being given analgesics, the patient's pain scale was measured, after which the analgesics were given and waited for the effects to decrease for 6 hours. Then, the pain scale was measured using the NRS (numeric rating scale) and the grated red ginger compress intervention was carried out for 20 minutes. After the intervention was completed, the pain scale was measured again to determine whether the pain decreased/remained/increased. Furthermore, the results of this study were analyzed in text form based on supporting facts, then presented in narrative form, tables, and graphs (Khofifah & Hidayati, 2023).

RESULTS AND DISCUSSION

The location of this research was conducted in the Anggrek 2 Ward of Dr. Sardjito General Hospital. Mr. S as a 49-year-old male respondent with a diagnosis of chronic progressive onset low back pain who complained of lower back pain that appeared suddenly caused by frequently lifting heavy objects and sometimes bending his body position while working, felt throbbing like being stabbed and did not spread to other parts of the body with a pain scale of 6 (moderate) appearing continuously which would increase if used for activities, and did not improve even after resting. Then a red ginger grated compress was carried out for 6 days with a frequency of 2 times a day or 10 interventions with a duration of 20 minutes and obtained the following results:

Table 1 Reduction In Pain Scale Before And After Administration Of Analgesics And Red Grated Ginger Compress Therapy

No	Day	Intervention	Pain Scale	
			Before	After
1	1	1	6	5
2	2	2	6	5
		3	5	4
3	3	4	5	3
		5	4	3
4	4	6	5	3
		7	4	2
5	5	8	3	2
		9	2	1
6	6	10	1	1



Picture 1 The Results Of The Red Ginger Grated Compress

On the first day, the grated red ginger compress could only be performed once because the patient had just been admitted to Anggrek Ward 2 at 1:30 PM WIB. Prior to the grated red ginger compress, a sensitivity test was performed on the patient's lower back to ensure there was no irritation or burning sensation, as red ginger has a stronger warming and heating effect than other types of ginger. Prior to the grated red ginger compress, the patient reported sudden pain in her lower back due to frequent lifting of heavy objects and bending over while working. The pain felt throbbing and stabbing, with a score of 6. After the 20-minute grated red ginger compress, the patient reported slightly less pain, feeling more comfortable, warm, and relaxed, and the pain decreased to a 5.

On the second day, two interventions were performed after the patient was given paracetamol and waited for the medication to take effect for 6 hours. A second intervention was performed for 20 minutes, and the pain decreased to a 5. The patient then received paracetamol again and waited for the medication to take effect for 6 hours. The third intervention lasted 20 minutes, and the pain decreased from a 5 to a 4.

On the third day, two interventions were performed after the patient was given paracetamol. The patient waited for the medication to take effect for 6 hours, and then the pain scale was assessed, with a score of 5. The fourth intervention lasted 20 minutes, and the pain decreased to a 3. The patient then received paracetamol again and waited for the medication to take effect for 6 hours. The fifth intervention lasted 20 minutes, and the pain decreased from a 4 to a 3.

On the fourth day, two interventions were performed after the patient was given paracetamol and waited for the medication to take effect for 6 hours, and then the pain scale was assessed, with a score of 5. The sixth intervention lasted 20 minutes, and the pain decreased to a 4. The patient then received paracetamol again and waited for the medication to take effect for 6 hours. The seventh intervention lasted 20 minutes, and the pain decreased from a 4 to a 2.

On the fifth day, two interventions were performed after the patient was given paracetamol and waited for the medication to take effect for 6 hours. The pain scale was assessed, and the result was a 3. The eighth intervention was performed for 20 minutes, and the pain decreased to a 2. The patient then received paracetamol again and waited for the medication to take effect for 6 hours. The ninth intervention was performed for 20 minutes, and the pain decreased from a 2 to a 1.

On the sixth day, a single intervention was performed because the patient was discharged home that afternoon. After the patient was given paracetamol and waited for the medication to take effect for 6 hours, the pain scale was assessed, and the result was a 1. The tenth intervention was performed for 20 minutes, and the pain remained at a 1.

Low back pain is a condition characterized by pain or discomfort in the lower back and is classified as a work-related musculoskeletal problem (Wida et al., 2023). Low back pain can be caused by, among other things, working position. Improper working posture or posture can increase the risk of LBP in individuals (Sahara & Pristya, 2020).

A red ginger compress is a frequently used therapy to relieve pain. This is due to the presence of gingerol and a warming sensation that can widen blood vessels and improve circulation, thereby reducing pain (Halawa et al., 2022). Red ginger compress therapy is performed by preparing 500 grams of grated ginger, or approximately 3-5 segments. Place it in a container and stir until it reaches a porridge-like consistency. The grated ginger is then applied to the painful area. Soak a towel in warm water, then wring it out and place it over the grated ginger. Apply the ginger compress for 20 minutes and repeat this process for 3 days (Khofifah & Hidayati, 2023).

This case study demonstrated a reduction in pain intensity after applying the red ginger compress for 20 minutes, twice a week, over 6 days. The pain scale before therapy was recorded at 6 (moderate pain), and after therapy, the pain scale decreased to 1 (mild pain).

This is in line with the study by Sinaga et al., (2024) entitled "Ginger Compresses to Reduce Back Pain in Pregnant Women at the Afiyah Primary Clinic in Pekanbaru City in 2023," which showed that applying ginger compresses for one week for 20 minutes effectively relieved back pain. In the study, before the ginger compress, Mrs. R experienced moderate back pain (6), and after seven days of therapy, the pain scale decreased to mild pain (1).

In addition, this is also supported by the opinion of Samsudin et al., (2016) who stated that applying warm compresses suppresses pain receptors in large nerves so that they modify the sensation before it reaches the brain cortex, resulting in a lower perception of pain, and relaxing muscle receptors so that pain is reduced. In addition, red ginger has anti-inflammatory properties that help overcome inflammation and reduce pain through its active compounds that inhibit leukotrienes and prostaglandins, the main mediators in the inflammatory process.

CONCLUSION

Compressing with grated red ginger for 6 days effectively reduces pain in low back pain patients, where before the compress was done, the pain scale was 6 (moderate pain) and after the compress, the pain scale became 1 (very mild pain).

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