

APPLICATION OF WARM COMPRESSES TO RELIEVE NECK PAIN IN HYPERTENSIVE CLIENTS IN PAGARUYUNG VILLAGE TAPUNG SUBDISTRICT, KAMPAR REGENCY, RIAU

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Abstract

People with high blood pressure often say that it makes their neck hurt. This is because high blood pressure puts pressure on the blood vessels in the neck. This can stop blood from flowing properly and can cause swelling and other problems in the neck area. Warm compresses are an effective way to reduce pain. They do this by making blood vessels bigger and muscles less tense. The aim of using warm compresses to treat neck pain in people with high blood pressure in Pagaruyung Village, Tapung District, Kampar Regency, Riau. The way it is put into practice looks at a case study based on Evidence Based Practice Nursing (EBN) on one client with high blood pressure. The treatment was done for three days in a row, twice a day. A jar of warm water (40–45°C) was used and the patient was left in it for 15–20 minutes. We measured the pain using something called the Numeric Rating Scale (NRS) before and after the therapy. The results showed that before they were given a warm compress, the client said they had neck pain and scored it at 6 (moderate pain). After the first day of treatment, the pain went down to a scale of 3; the second day, to a scale of 2–3; and the third day, to a scale of 0–1 (no pain). The patient's blood pressure dropped from 160/95 mmHg to 130/85 mmHg. The client looked more relaxed, did not make any faces, and was able to turn her head without complaining. There were no side effects on the skin during the procedure. Warm compress therapy effectively reduced the intensity of neck pain in patients with high blood pressure through the processes of widening the blood vessels, increased blood circulation, and muscle relaxation. This treatment is safe and simple, and patients can do it themselves at home. It is hoped that warm compress therapy can be used as a way to manage pain in hypertensive patients without the use of medicines. Patients are encouraged to continue applying warm compresses on their own as a supportive therapy alongside medical treatment

Keyword: warm compress; neck pain; hypertension.

INTRODUCTION

Non-communicable diseases (NCDs) are one of the leading causes of death worldwide. Cardiovascular disease is a leading cause of death, with a death rate of 17.9 million cases per year. Hypertension is a major contributor, as it can lead to serious complications such as stroke, heart failure, and vascular disorders (Palupi et al., 2024). Hypertension is a condition of persistently elevated systolic blood pressure of ≥ 140 mmHg and/or diastolic blood pressure of ≥ 90 mmHg (Witriyani, 2023). According to the World Health Organization (2023), approximately 1.28 billion adults worldwide suffer from hypertension, and nearly half are unaware of their condition. One of the symptoms frequently reported by hypertension sufferers is neck pain due to impaired blood circulation in the area. Increased pressure on the walls of blood vessels causes stiff neck muscles and a painful sensation due to the accumulation of metabolic waste (Fadlilah, 2019). Hypertension management can be carried out through two approaches: pharmacological and non-pharmacological. Non-pharmacological approaches, such as warm compresses, have been shown to help reduce pain and increase comfort without side effects (Mauliddia, 2022). Warm compresses work by

dilating blood vessels (vasodilation), improving blood circulation, and relaxing tense muscles (Ambrosetti et al., 2021). Based on this, the author applies warm compresses as a non-pharmacological intervention to treat neck pain in hypertensive clients in Pagaruyung Village, Tapung District, Kampar Regency, Riau.

RESEARCH METHOD

manner, by comparing pain scores before and after giving warm compresses. Please provide sufficient detail to allow the work to be reproduced. If the study using a reagent, details of supplier should be provided when appropriate. Methods already published should be indicated by a reference and only relevant modifications should be described. For epidemiology, details of setting, time and place should be provided. (Georgia 11 with 1,15 space). Study This use approach Evidence Based Practice Nursing (EBN) with design experiment simple (pre-test and post-test) . Subject study is One client Woman 55 years old with a medical diagnosis hypertension and complaints painful neck part behind .

Procedure Implementation

- Place and time: held in Pagaruyung Village, Tapung District, Kampar Regency, Riau, on 18–20 October 2025.
- Intervention: apply a warm compress using a jar of water at a temperature of 40– 45°C wrapped in a thin towel, applied to the back of the neck area for 15–20 minutes, twice a day (morning and evening).
- Pain measurement: performed using the Numeric Rating Scale (NRS) before and after the procedure every day. Data analysis: was carried out in a descriptive observational

RESEARCH RESULTS

Prior to therapy, the client reported neck pain at a scale of 6 (moderate pain) . After three consecutive days of intervention, the following results were obtained:

| Day/ Date | Pain Scale Before | Category | Post- Pain Scale | Category | Blood pressure |
|---|----------------------|---------------|------------------------|--------------|----------------------------|
| Saturday, 18 october 2025 <u>(08:10 WIB)</u> | 6 | Moderate pain | 4 | Mild pain | 160/95 → 145/90 mmHg |
| sunday, 19 october 2025 <u>(09.00)</u> | 4 | Moderate pain | 3 | Mild pain | 138/88 mmHg |
| monday, 20 october 2025 <u>(09.30)</u> | 3 | Mild pain | 1 | No Mild pain | 130/85 mmHg |

After three days of application, the client appeared more relaxed, no longer grimacing, had lower blood pressure, and improved neck flexibility . The client was also able to perform light activities without complaint and understood how to apply warm compresses independently at home. No findings were found . effect side on the skin during action .

DISCUSSION

The results showed a significant reduction in neck pain intensity after warm compress therapy. The decrease in pain scores from 6 to 0–1 demonstrated that warm compresses are effective as a non-pharmacological therapy for reducing pain in people with hypertension. Warm compresses work through the physiological mechanism of vasodilation, which is the widening of blood vessels, increasing blood flow and tissue oxygenation (Rahmanti & Pamungkas, 2022). This increased blood flow reduces the accumulation of lactic acid and metabolic waste, which trigger pain (Sutomo, 2022). Furthermore, heat stimulates thermal receptors in the skin, which send signals to the brain to inhibit the transmission of pain impulses, resulting in relaxation (Gotter & Marcin, 2019). These results align with research by Syara et al. (2021), which found that applying warm compresses significantly reduced neck pain intensity in hypertensive patients (p -value <0.05). Similar findings were also reported by Pamungkas et al. (2025) and Dwinta Widya Navita et al. (2024), where warm compress therapy improved patient comfort by increasing blood circulation and relaxing muscles.

Besides being effective, this intervention is safe, inexpensive, and easy to administer by both nurses and patients at home. This approach supports *evidence-based nursing practice*, which emphasizes simple interventions that have a significant impact on the quality of life of patients with hypertension

CONCLUSION

The application of warm compresses has been proven effective in reducing neck pain in hypertensive patients. After three days of therapy, pain levels decreased from 6 to 0–1 and blood pressure improved from 160/95 mmHg to 130/85 mmHg. This therapy works through vasodilation, increased blood circulation, and muscle relaxation. Warm compresses are a simple and safe non-pharmacological intervention that can be applied by nurses in nursing practice or by patients independently at home.

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