



Physiotherapy Treatment of Hypertension Patients to Reduce Headache Using Slow Stroke Back Massage Therapy

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Abstract. Hypertension is a disease where the systolic blood pressure is more than normal (> 140 mmHg). The signs and symptoms that often appear are headaches due to increased cerebral vascular pressure and impaired oxygen supply to the brain. A common problem felt by people with hypertension is usually headaches. Non-pharmacological therapy Slow Stroke Back Massage (SSBM) can lower blood pressure by activating the work of the parasympathetic nerves and endorphins. So that blood flow becomes smooth due to vasodilation of blood vessels. This method increases body relaxation, increases levels of the hormone of happiness, and decreases the hormones cortisol, norepinephrine, and dopamine. This therapy can be done by anyone, so it can be implemented independently without medical personnel. The purpose of this study is to provide an overview of hypertensive patients and determine the effectiveness of Slow Stroke Back Massage therapy with complaints of headache. This study uses a descriptive case study method that describes the results. The results of these data come from the results of interviews and observations of three respondents. There was an average decrease in systolic blood pressure of 10 mmHg after therapy and the pain scale decrease from 1 until 0 on the third day. This therapy is easy to do independently because it has no negative effects and is effective in reducing headaches.

Keywords: Headache · Hypertension · Slow Stroke Back Massage

1 Introduction

Hypertension is a serious challenge that is being burdened by various countries, the data collected shows that 21% of the world's population has hypertension [1]. It is estimated that hypertension will attack 1.5 billion people in 2025 with the death rate touching 9.4 million [2]. Hypertension is a fairly high problem in Indonesia. The data collected shows as much as 7.35% attack the age range between 18 to 24 years, 10.41% attack the age of 25 to 34 years, and 21.35% attack the age of 35 to 44 years [3].

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Increasing age is one of the factors that trigger hypertension, due to decreased elasticity of blood vessels causing constriction so that the pressure becomes high. But apart from that, there are other causes such as sodium levels in the blood, gender, a person's age, smoking history, lack of physical activity, and being overweight [4, 5]. Common problems felt by people with hypertension are usually headaches, blurred and spinning vision, stiffness in the neck, chest pain, and feeling tired quickly when doing activities [6].

The massage technique is a direct skin-to-skin contact therapy to increase the relaxing effect on the body [7]. Massage can be a means of sending signals to the brain to lower blood pressure so that the effects of headaches can decrease. Slow stroke back massage (SSBM) therapy is a method that can be implemented as a method of increasing body relaxation, increasing levels of the hormone of happiness, and decreasing the hormones cortisol, norepinephrine, and dopamine [8]. This therapy can be done by anyone, so it can be implemented independently without medical personnel [9, 10].

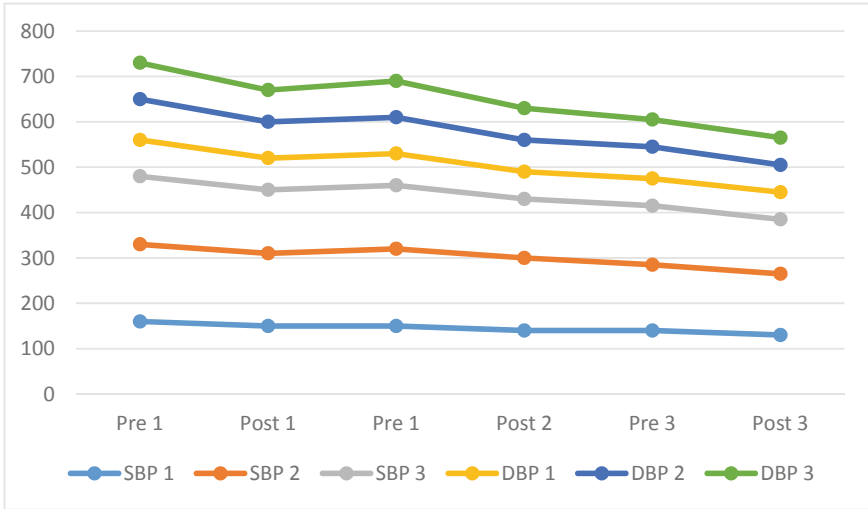
SSBM therapy is proven to be able to relieve hypertension and affects reducing headaches due to vasodilation of blood vessels to the brain that supplies oxygen and nutrients [11, 12]. There are differences between pre-implementation and post-implementation of this massage with the results of a decrease in systolic pressure of 6.44 mmHg and diastolic 4.77 mmHg with the effect of reducing pain complaints in respondents [13]. The purpose of this study was to determine the effectiveness of using this technique in reducing the headache scale in patients with hypertension.

2 Method

This research was carried out using a descriptive case study method by taking or obtaining data through interviews, observations, subjective and objective documentation according to the respondent's condition, and taking the research basis from the literature study. This study describes the effectiveness of using SSBM therapy to reduce headaches in patients with hypertension. Respondents were hypertensive patients with criteria for experiencing headaches on a scale of 1–6, conscious, and over 35 years of age. The exclusion criteria were fractures, back injuries, and a history of spinal cord injury. This therapy was carried out for 5–10 min on the back area using lotion for 3 patients. Before therapy, the patient's pain scale was measured using a Numeric Rating Scale and blood pressure using a sphygmomanometer. The measurement results are documented in the observation sheet. Therapy was carried out for 3 days. Therapy is carried out by a certified expert.

3 Result

Patients with hypertension who met the criteria were treated with SSBM therapy for 3 days. Different responses were shown by some patients as shown in Fig. 1. Observations were made to see changes in blood pressure and pain scale before and after therapy. Therapy is done 2 times a day in the morning and evening. Not all patients were treated simultaneously, but they still received therapy twice.



Description: SBP (Systolic Blood Pressure), DBP (Diastolic Blood Pressure)

Fig. 1. Blood pressure changes

Assessment of the three respondents resulted in complaints of headaches on a moderate scale. The three respondents knew that they had a history of hypertension since participating in routine posyandu activities in the past year. Respondents said that at several posyandu meetings, the blood pressure was high. However, respondents never took anti-hypertensive drugs because they felt they did not cause excessive pain complaints.

4 Discussion

Based on the study results, several factors of hypertension occur in respondents ranging from age, psychological factors, eating patterns consumed, and physical activity. One of the psychological factors that trigger hypertension is proven by the first respondent. Respondents experienced headaches due to stress. Usually respondents say they often experience headaches, nausea, and can't move when there are family problems. When he checked his blood pressure, it turned out to be high [14, 15].

Another factor, namely age, can be seen in the three respondents that old age is one of the triggering factors for hypertension due to decreased elasticity of blood vessels. When blood is forced through narrow vessels, the pressure will increase to channel the need for nutrients and oxygen supply to the cells [5]. In addition, based on the age difference, the respondents who were taken also showed that a younger age could not guarantee avoiding high blood pressure. When viewed from the physical activity seen, there are differences in the workload carried out. Respondents with more active physical activity had lower blood pressure than those with less physical activity, even older [16].

Factors of tension can be influenced by age, activity patterns, nutritional patterns (salt consumption), and unhealthy lifestyles (smoking) [11, 17]. Physical activity can prevent hypertension because regular and sufficient physical activity makes blood circulation

smooth. Blood vessels will widen when accustomed to doing physical activities because the body will automatically need a lot of blood supply during activities. The first and second patients have husbands who actively smoke, so they are exposed to cigarette smoke more often than the third patient.

Based on the assessment of the three respondents, data were obtained on the presence of moderate-scale headaches accompanied by an increase in blood pressure. So the author takes a nursing diagnosis or problem, namely acute pain related to increased cerebral vascular pressure and impaired oxygen supply. An increase in blood pressure causes this pain because the resistance of blood vessels in the brain increases so that the flow is disturbed [18, 19].

Based on Fig. 1, it can be seen that there was a decrease in blood pressure which on average decreased by ten mmHg each time it was implemented. The decrease in blood pressure was also accompanied by a decrease in the pain scale in the three respondents. Every time it is implemented, the average reduction in pain scale is one score using a numeric rating scale [20]. The three respondents appeared to experience a uniform decrease in pain scale despite a reasonably extensive age range, but this SSBM therapy was still adequate for all ages.

The assessment and evaluation of the results showed that the respondent's pain scale decreased because it was caused by differences in age, activity and psychological factors [11]. Factors for hypertension can be influenced by age, psychological factors, activity, nutritional patterns (salt consumption), and unhealthy lifestyles (smoking) [17]. Differences in the experience of pain cause the different pain scales for each respondent felt so that with the same pain, the response to the pain felt is different. A person's age and pain experience can affect the perceived pain response [21].

The application of SSBM therapy was still practical even though the pain response felt by each respondent was different. However, there was still a decrease in the pain felt by each respondent. SSBM therapy for three days can reduce the headache scale in hypertensive patients [22, 23]. This is evident in the implementation that has been carried out on the three respondents [24]. Implementing this therapy also does not have any negative impacts, so it is safe to give to hypertensive patients who do not have a history of chest and spine trauma [25].

In addition, SSBM therapy can reduce blood pressure in hypertensive patients. Massaging the back area can reduce sympathetic nerve activity and activate parasympathetic activity, so blood vessels relax or widen. The dilation of the blood vessels causes the blood pressure to drop. This reduces vascular resistance in the brain or cerebral vascular pressure so that headaches can be reduced to reduced headaches. The secretion of endorphins is also a factor in reducing headaches because it functions as a natural analgesic in reducing pain.

5 Conclusion

Slow Stroke Back Massage (SSBM) therapy is effective given to hypertensive patients with complaints of pain in the neck and lowering blood pressure with a minimum of 3 days of therapy. This non-pharmacological action can be done with pharmacological therapy to speed up the healing process. Follow-up of therapy.

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