

Intervention of Slow Stroke Back Massage (SSBM) Therapy for Hypertensive Elderly

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Abstract: The prevalence of diseases in the elderly increases with age due to declining body functions, including blood vessel function, leading to conditions like hypertension. Hypertension, characterized by systolic blood pressure over 140 mmHg and diastolic over 90 mmHg, is a major risk factor for kidney failure, heart failure, and stroke. This case study examines nursing care with slow stroke back massage (SSBM) therapy as an intervention to reduce blood pressure in elderly hypertensive patients. A descriptive case study approach was used, involving nursing assessment, diagnosis, intervention, implementation, and evaluation. The subject was an elderly patient, Mrs. P, at the Garut Elderly Home Service Unit. The interventions, particularly slow stroke back massage, effectively addressed the patient's discomfort and sleep pattern disturbances. The risk of decreased cardiac output and falls were partially resolved. The sustained management of hypertension requires a longer timeframe for optimal control of blood pressure. Slow stroke back massage significantly impacts lowering blood pressure in patients with hypertension and is recommended as a beneficial therapy.

Keywords: Elderly, Hypertension, Slow Stroke Back Massage (SSBM)

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Introduction

As individuals age, physiological functions progressively decline, including the elasticity and efficiency of blood vessels, which often leads to elevated blood pressure (hypertension) (Unger et al., 2020). This condition significantly increases the risk of mortality due to complications such as kidney failure, heart failure, and stroke (Mills et al., 2016). Hypertension is a leading cause of cardiovascular diseases, particularly among the elderly, necessitating effective management strategies to mitigate adverse outcomes.

Managing hypertension in elderly patients is crucial to prevent life-threatening complications.

Pharmacological treatments, such as antihypertensive medications, are commonly prescribed, but non-pharmacological interventions also play a vital role (Whelton et al., 2018). Lifestyle modifications, including dietary changes, physical activity, and relaxation techniques, are essential components of hypertension management. Among these, Slow Stroke Back Massage (SSBM) has emerged as a promising complementary therapy for reducing blood pressure in elderly individuals (Hadi et al., 2018).

SSBM is a gentle massage technique that applies slow, rhythmic strokes to the back, promoting relaxation and reducing sympathetic nervous system activity

(Suprpto et al., 2019). Several studies have demonstrated that Slow Stroke Back Massage (SSBM) can effectively lower blood pressure through its influence on the autonomic nervous system and stress response. Hadi et al. (2018) found that SSBM significantly reduced both systolic and diastolic blood pressure in elderly hypertensive patients, with these effects being attributed to increased parasympathetic tone and reduced cortisol levels. Further supporting this, Field et al. (2017) reported that massage therapy, including SSBM techniques, led to a 28% reduction in cortisol levels along with increased serotonin and dopamine, creating a neuroendocrine environment conducive to blood pressure reduction. The most comprehensive evidence comes from Chiu et al. (2019), whose meta-analysis of 15 randomized controlled trials confirmed that massage therapies like SSBM consistently improved parasympathetic activity markers (as measured by heart rate variability) and resulted in clinically significant blood pressure reductions averaging 7.5 mmHg systolic and 4.3 mmHg diastolic. These studies collectively establish SSBM's physiological mechanisms of action, showing how its gentle, rhythmic strokes modulate both the autonomic nervous system and stress hormone production to produce measurable cardiovascular benefits, particularly in elderly populations.

This intervention is particularly beneficial for elderly patients who may experience side effects from long-term medication use.

This study examines the nursing care provided to Mrs. P, an elderly hypertensive patient at the Garut Elderly Home Service Unit, with a focus on the effectiveness of SSBM in managing her condition. Mrs. P's treatment plan included regular SSBM sessions alongside standard hypertension management protocols.

Method

This study employed a descriptive case study method. This approach was chosen to provide an in-depth understanding of the nursing care provided to an elderly patient with hypertension and the application of Slow Stroke Back Massage. Data collection involved comprehensive nursing assessments, detailed interviews with the patient, and meticulous documentation of vital signs. The primary intervention was the administration of Slow Stroke Back Massage (SSBM) therapy, performed daily for three consecutive days. Each session lasted approximately 15-20 minutes. Baseline blood pressure readings were taken before each session, and subsequent readings were recorded immediately after the massage to evaluate its immediate effects.

The study was conducted at the Garut Elderly Home Service Unit. In this study, all ethical principles were applied, including informed consent, the right to withdraw, justice, beneficence, non-maleficence, and confidentiality.

Result and Discussion

Following the implementation of Slow Stroke Back Massage (SSBM) therapy, Mrs. P, an elderly hypertensive patient at the Garut Elderly Home Service Unit, demonstrated measurable improvements in her condition. Over a three-day intervention period, her blood pressure decreased from an initial reading of 170/90 mmHg to 159/85 mmHg, indicating SSBM's potential antihypertensive effect. This finding aligns with research by Hadi et al. (2018) and Suprpto et al. (2019), who reported similar blood pressure reductions in elderly patients receiving SSBM, attributing this effect to parasympathetic nervous system activation and reduced vascular resistance.

In addition to physiological improvements, Mrs. P reported enhanced comfort and relaxation following each massage session, with noticeable reduction in headache intensity. These subjective reports correlate with evidence from Field (2018), who found that massage therapy lowers cortisol levels and promotes relaxation in hypertensive individuals. The intervention also positively impacted Mrs. P's sleep quality, as she experienced fewer nighttime awakenings and longer sleep duration. Cheraghbeigi et al. (2020) support this observation, demonstrating that SSBM modulates autonomic nervous system activity to improve sleep patterns in the elderly. Importantly, Mrs. P maintained her ability to perform daily activities independently, suggesting SSBM's role in preserving functional status among geriatric patients, as noted in Anggraeni et al.'s (2021) study on non-pharmacological interventions.

The initial assessment of Mrs. P's condition revealed multiple nursing concerns, including elevated blood pressure, discomfort, sleep disturbances, risk of decreased cardiac output, and fall risk. These findings reflect common complications of geriatric hypertension, where age-related vascular stiffness and autonomic dysregulation exacerbate symptoms (Unger et al., 2020). The observed improvements following SSBM therapy can be explained through several mechanisms. First, the gentle, rhythmic strokes characteristic of SSBM are known to reduce sympathetic nervous system dominance while enhancing parasympathetic activity, leading to blood pressure reduction (Whelton et al., 2018). Second, by decreasing cortisol levels and promoting vasodilation, SSBM addresses both physiological and psychological stress components (Field, 2018). Third, improved peripheral circulation

from regular SSBM sessions may contribute to better mobility and reduced fall risk (Anggraeni et al., 2021).

The effectiveness of SSBM in this case study is supported by broader evidence-based practice. Suprpto et al. (2019) reported a 12% reduction in blood pressure among elderly hypertensive patients receiving SSBM, while Hadi et al. (2018) emphasized its cost-effectiveness and safety compared to pharmacological treatments. These findings highlight SSBM's value as a complementary therapy, particularly for elderly patients vulnerable to polypharmacy complications (Mills et al., 2016).

This case underscores the importance of integrating non-pharmacological interventions like SSBM into comprehensive gerontological care. By addressing both physical symptoms and psychological wellbeing, SSBM exemplifies a patient-centered approach to hypertension management. Future research should explore long-term SSBM effects and standardized protocols to optimize its clinical application. For nursing practice, these results suggest that SSBM can be effectively incorporated into care plans to enhance quality of life for elderly hypertensive patients while reducing reliance on medication.

Conclusion

Slow Stroke Back Massage (SSBM) therapy shows promise as an effective non-pharmacological intervention for managing hypertension in elderly patients. The findings support the integration of SSBM into holistic nursing care plans to improve comfort, promote relaxation, and assist in blood pressure control.

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Author Contributions

All listed authors have made substantial contributions to this research. Each participated in study design, data collection, analysis, and manuscript preparation.

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Conflicts of Interest

The author declares no conflict of interest.

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