

Section: Mental Health Nursing

Acupressure therapy for reducing blood pressure in elderly with hypertension

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Abstract

Individuals with hypertension often require a considerable recovery period, particularly among the elderly population where the condition is more prevalent. Hypertension affects both physiological and psychological aspects of health in older adults. One common psychological issue in the elderly is anxiety, which often stems from poor adaptation to life changes. Addressing anxiety disorders in elderly patients with hypertension involves two main approaches: pharmacological and non-pharmacological therapies. In managing this case, the author employed a complementary therapy approach, specifically acupressure, as a non-pharmacological intervention. Acupressure therapy involves massage and stimulation at specific points on the body to promote relaxation and physiological balance. In this intervention, acupressure was applied to points LI4 (Hegu), GV20 (Baihui), GB20 (Fengchi), and GB21 (Jianjing). These points are located on the surface of the body and, when stimulated, can trigger the release of endorphins, which help reduce anxiety and promote a sense of well-being. The results of the acupressure therapy demonstrated a significant reduction in both anxiety levels and blood pressure in the client. This outcome supports the effectiveness of acupressure as a complementary intervention for elderly patients with hypertension. The therapy was implemented in Aster Room 4 at Tidar Regional Hospital, Magelang City. It is hoped that this intervention will serve as a valuable reference for enhancing knowledge, skills, and practices in nursing care. Specifically, it may inform future strategies for managing anxiety in patients with hypertension through holistic and culturally sensitive approaches.

Keywords: Acupressure, anxiety, complementary therapy, elderly, hypertension

Introduction

Hypertension is a significant public health concern that rarely presents with symptoms affecting a patient's functional health (Goorani et al., 2024). It is commonly found among the elderly. According to the World Health Organization (WHO), in 2022, approximately 1.13 billion people worldwide were living with hypertension—equivalent to 1 in 3 individuals globally (World Health Organization, 2023). Data from the Indonesian Ministry of Health (2019) reported that the prevalence of hypertension among older adults in Indonesia was 45.9% in those aged 55–64, 57.6% in those aged 65–74, and 63.8% in those aged 75 and above. Hypertension affects both physiological and psychological aspects of health in the elderly (Turana et al., 2021). Although physical deterioration may occur, recovery and stabilization are possible; however, psychological factors play a critical role in hypertension management. In later life, individuals often experience anxiety related to illness, sleep disturbances, fear of death, and the loss of loved ones. Psychosocial problems in the elderly with hypertension frequently stem from poor adaptation to change, with anxiety being a common manifestation (Cuevas et al., 2017). Hypertension often progresses without noticeable signs or symptoms, leading to delays in diagnosis and treatment (Lu et al., 2025). Psychologically, individuals with hypertension may feel that their lives lack meaning due to physical weakness and the chronic nature of the disease. Additionally, increased cerebral blood flow may cause discomfort and impair concentration, affecting social interactions and leading to social withdrawal. This can result in heightened anxiety and diminished quality of life. Anxiety is prevalent among the elderly, with 10–20% experiencing symptoms (Qiu et al., 2023).

Management of anxiety disorders in elderly individuals with hypertension is typically carried out through two approaches: pharmacological therapy and complementary therapy. Complementary therapy is often more affordable than conventional medical treatment and tends to have minimal side effects, making it a viable alternative for elderly patients (Siddiqui et al., 2014; Morrissey et al., 2022). Common complementary therapies include relaxation techniques, acupressure cupping, and Spiritual Emotional Freedom Technique (SEFT) therapy. Acupressure therapy involves massage and stimulation at specific points on the body (Komariah et al., 2021). It is performed by applying pressure or gentle vibrations for 15–20 seconds at each point. These acupressure points are located on the surface of the skin and are sensitive to bioelectrical stimulation, allowing them to transmit signals effectively. Stimulating these points triggers the release of endorphins, neurotransmitters known to reduce pain, stress, depression, and anxiety (Au et al., 2015). This mechanism aligns with research indicating that acupressure in elderly patients—targeting points

such as Lr 2 (Xingjian), Lr 3 (Taichong), Sp 6 (Sanyinjiao), Ki 3 (Taixi), Li 4 (Hegu), and PC 6 (Neiguan)—activates sensory nerve cells around the acupressure sites. These signals are transmitted to the spinal cord, mesencephalon, and hypothalamic-pituitary complex, which in turn stimulate endorphin release, promoting a sense of calm and comfort. The therapeutic effect was reflected in measurable outcomes: the average systolic blood pressure decreased from 157.50 mmHg to 147.81 mmHg, while the average diastolic pressure dropped from 96.69 mmHg to 87.94 mmHg following acupressure therapy.

This case study is important because it highlights the potential of acupressure therapy as a safe, cost-effective, and culturally adaptable non-pharmacological intervention for managing hypertension and anxiety in elderly patients. Given the chronic nature of hypertension and the psychological vulnerability of older adults, especially those with caregiving stressors, this approach promotes a holistic alternative that complements standard medical treatment. The documented improvements in blood pressure, sleep quality, and anxiety levels demonstrate the therapeutic value of acupressure in enhancing patient comfort and quality of life. Moreover, the findings can inform nursing practice and encourage further research on complementary therapy.

Case Description

At the assessment stage, data were obtained from an elderly female patient, Mrs. T, aged 70, with an elementary school education. She lives in North Magelang with her husband, who has suffered a stroke. Mrs. T has a history of uncontrolled hypertension. Over the past three days, she has experienced difficulty sleeping, anxiety, and persistent worry. Upon hospital admission, her blood pressure was 210/102 mmHg. During the assessment, it measured 184/100 mmHg. Her diet and elimination patterns were normal. The primary complaint was a throbbing headache, which had persisted for three days. She appeared weak, confused, and anxious, expressing concern about her husband being left alone at home without care. Anxiety (D.0080) was identified as the priority nursing diagnosis due to its potential to disrupt sleep patterns. This aligns with Maslow's hierarchy of needs, which emphasizes sleep as a fundamental physiological requirement. Inadequate rest can worsen hypertension, creating a cycle of interrelated health issues. Nursing interventions were tailored to address her anxiety and the risk of ineffective cerebral perfusion due to hypertension. These interventions followed the Indonesian Nursing Intervention Standards (SIKI), with a focus on relaxation therapy (I.09326). The intervention involved acupressure relaxation therapy administered for approximately 15 minutes. Acupressure was applied to specific acupressure points: Hegu (LI4) between the index finger and thumb, Baihui (GV20) at the top of the head, Fengchi (GB20) at the back of the neck between muscle and bone, and Jianjing (GB21) at the top of the shoulder between the neck bone and shoulder blade. Each point was stimulated 30 times and the therapy was performed daily. On the second day, the patient reported reduced headache intensity. Although sleep remained difficult (rated 3), her facial expression appeared more relaxed. With assistance from family, she was able to perform acupressure. Her blood pressure decreased to 150/82 mmHg. By the third day, she reported improved sleep, waking only once during the night, with her sleep scale increasing from 3 to 5. Her blood pressure further decreased to 138/75 mmHg. Although anxiety was the primary focus, the patient also noted a significant reduction in dizziness. These outcomes suggest that alleviating anxiety can positively influence headache symptoms and blood pressure control.

Discussion

The assessment results indicated that the patient, diagnosed with urgent hypertension, was experiencing anxiety. This was evidenced by complaints of throbbing headaches, neck pain, and difficulty sleeping—limited to only 2–3 hours per night. The patient expressed worry and fear due to her husband suffering a stroke at home, with no one available to care for him. She was afraid something might happen to him in her absence. Clinically, the patient appeared weak, with a sad and confused facial expression, and her blood pressure was elevated. These findings suggest that the patient requires immediate intervention to prevent further complications. Anxiety is a known risk factor for hypertension, often triggered by conditions such as worry, fear, and restlessness, accompanied by various physical symptoms and health disturbances (Johnson, 2019; Pan et al., 2015). Anxiety is a subjective experience of mental tension, typically arising from an inability to resolve problems or a lack of perceived safety. These distressing emotions can lead to physiological and psychological changes. Common signs of anxiety include worry, fear, sleep disturbances, headaches, and elevated blood pressure.

The nursing diagnoses established were anxiety and the risk of ineffective cerebral perfusion. The intervention focused on relaxation therapy using a non-pharmacological approach. The complementary therapy provided was acupressure-based relaxation. The patient expressed a preference for acupressure or massage, stating that it felt more comfortable. The therapy was administered for approximately 15 minutes. Acupressure was performed by massaging specific points: the Hegu point (LI4), located between the index finger and thumb; the Baihui point (GV20), located at the top of the head; the Fengchi point (GB20), located at the back of the neck in the depression between the neck muscles and bones; and the Jianjing point (GB21), located at the top of the shoulder, midway between the neck bone and shoulder blade. Pressure was applied to each point approximately 30 times, and the therapy was recommended for daily use. This approach aligns with existing literature stating that acupressure therapy involves massage and stimulation at specific points on the body (Mehta et al., 2016). It is typically performed by pressing or applying

vibrations for 15–20 seconds at each location. These acupressure points are situated on the skin's surface, are sensitive to bioelectrical stimulation, and can transmit signals. Stimulating these points triggers the release of endorphins—neurotransmitters that help reduce pain, stress, depression, and anxiety. Additionally, acupressure therapy contributes to a decrease in adrenaline levels, improving a sense of calm and relaxation. This physiological response slows the heart rate and ultimately lowers blood pressure. Emotion-focused coping strategies aim to reduce negative emotional reactions to stress, and acupressure relaxation provides comfort through therapeutic touch, thereby alleviating anxiety. This aligns with the concept of psychological comfort, defined as the emotional and psychological state in which individuals feel safe, secure, and at ease.

The results showed that acupressure has been scientifically proven to enhance relaxation, reduce pain and anxiety, accelerate wound healing, and contribute positively to psychoimmunological changes. Complementary acupressure therapy can be performed independently, is more affordable than conventional treatments, and has minimal side effects, making it suitable for elderly patients (Li et al., 2023; Li et al., 2024). Based on three days of patient care, it was concluded that the primary issue was anxiety, triggered by fear of failure and the risk of ineffective cerebral perfusion—a contributing factor to hypertension. The application of acupressure had a positive impact on nursing practice, with benefits including reduced anxiety, increased comfort, alleviation of anxiety-related symptoms, improved sleep quality, and accelerated recovery. This case study provided the author with direct experience in providing comprehensive nursing care to an elderly patient with acute pain and sleep disturbances. The strength of this study is the holistic nature of the intervention, encompassing physical, psychological, environmental, and family support aspects. Furthermore, the therapy used, acupressure, is a non-pharmacological intervention that is simple, inexpensive, safe, and easy to teach to patients and their families. Another advantage is that the intervention was performed routinely over three days, allowing changes in the patient's condition to be monitored daily. This case study also reinforces the fact that simple nursing interventions can yield tangible results when implemented with the right approach and active patient and family involvement. A limitation of this case study is that because the author applied the acupressure relaxation technique to a single patient, the author cannot compare its effectiveness on multiple patients with the same case at the same time. Another limitation is that the assessment and evaluation of anxiety levels did not use a tool to measure patient anxiety.

Conclusion

The comprehensive implementation of nursing care—including assessment, diagnosis, planning, implementation, and evaluation—has demonstrated a positive impact on the condition of a patient with hypertension. During the assessment, the patient reported complaints of headache, neck pain, and difficulty sleeping. She expressed concern about her husband, who had suffered a stroke, fearing that no one would be available to care for him or that something might happen in her absence. The primary nursing diagnosis was anxiety. An intervention plan was developed based on the Indonesian Health Survey (IDHS), the Indonesian Nursing Intervention Classification (SIKI), and the Indonesian Nursing Outcome Classification (SLKI), utilizing a non-pharmacological approach. This included 15 minutes of acupressure therapy administered over three consecutive days. Daily evaluations revealed a reduction in both anxiety and blood pressure, indicating that a systematic nursing care process can enhance patient comfort and improve quality of life. Acupressure therapy was applied at the Hegu (LI4), Baihui (GV20), Fengchi (GB20), and Jianjing (GB21) points. The intervention significantly reduced anxiety and blood pressure. Following the therapy, sleep quality improved from a scale of 3 to 5, dizziness complaints decreased from a scale of 3 to 5, and blood pressure dropped from 164/98 mmHg to 138/75 mmHg. These findings suggest that acupressure is an effective complementary non-pharmacological therapy for managing anxiety in hypertensive patients, particularly among the elderly. Future studies are encouraged to involve larger sample sizes to further evaluate the effects of acupressure in similar clinical cases.

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