

Application of Hydrotherapy and Buerger Allen Exercise to Reduce Blood Pressure in Hypertensive Family Members with Ineffective Family Health Management in the Working Area of Arjuno Public Health Center, Malang City

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ABSTRACT

Hypertension is a condition in which the systolic blood pressure exceeds 140 mmHg and the diastolic exceeds 90 mmHg at rest. If not properly managed, it can lead to damage in the kidneys, heart, and brain. The application of hydrotherapy and Buerger Allen exercise has been proven effective in lowering blood pressure among family members suffering from hypertension. This study aims to analyze family nursing care in the application of hydrotherapy and Buerger Allen exercise to reduce blood pressure in individuals with hypertension, particularly those experiencing problems with ineffective family health management, in the working area of Arjuno Community Health Center, Malang City. The method used in this study is a case study approach, with nursing care interventions carried out from April 25 to 27, 2025, in the service area of Arjuno Health Center, Malang City. Data were collected through observation, interviews, and document review. The results showed a significant reduction in blood pressure following the implementation of hydrotherapy—specifically, soaking the feet in 40°C warm water for 15 minutes—and Buerger Allen exercise for 15 to 18 minutes. In conclusion, after three days of hydrotherapy and Buerger Allen exercise interventions, the patient's blood pressure decreased from 168/100 mmHg to 120/80 mmHg. It is recommended that the patient and family maintain a healthy lifestyle and independently continue the use of hydrotherapy and Buerger Allen exercise to control blood pressure and prevent complications.

Keywords: *Hypertension, Hydrotherapy, Buerger Allen Exercise, Family Health Management, Blood Pressure*