

*IMPLEMENTATION OF THE BUERGER ALLEN EXERCISE TO PREVENT
DIABETIC FOOT WOUNDS IN TYPE II DIABETES MELLITUS PATIENTS AT
PANEMBAHAN SENOPATI HOSPITAL, BANTUL*

Fathonah Dwi Anggraeni¹, Sapta Rahayu Noamperani², Abdul Majid³
Nursing Department of the Yogyakarta Ministry of Health polytechnic
Jl. Tata Bumi No. 3 Banyuraden, Gamping, Sleman, Yogyakarta
Email: fdwianggraeni1405@gmail.com

ABSTRAK

Background: Type II Diabetes Mellitus is a chronic metabolic disease characterized by elevated blood glucose levels due to impaired insulin secretion, insulin resistance, or both. One of the non-pharmacological interventions that can be used to improve peripheral blood circulation is Buerger Allen Exercise (BAE). Buerger Allen Exercise is an active exercise for the lower extremities involving position changes and muscle movements aimed at improving peripheral blood flow. **Objective:** To implement Buerger Allen Exercise in improving peripheral perfusion in patients with Type II Diabetes Mellitus at Panembahan Senopati Bantul Regional Hospital.

Methods: This study used a descriptive case study design with a nursing care approach involving two patients, Mrs. N and Mrs. S, who experienced ineffective peripheral perfusion. The Buerger Allen Exercise intervention was carried out for four consecutive days, twice daily in the morning and afternoon, for 15–20 minutes each session. Evaluation was conducted through patient condition observation, random blood glucose level examination, and measurement of the Ankle Brachial Index (ABI) before and after the intervention.

Results: The case study showed an improvement in peripheral perfusion in both patients after regular Buerger Allen Exercise. In addition, both patients reported reduced tingling sensations, warmer feet, and greater comfort during activities. Observation results also indicated improvement in extremity temperature and a reduction in signs of peripheral perfusion impairment.

Conclusion: The implementation of Buerger Allen Exercise has been proven to improve peripheral perfusion, as evidenced by improvements in the Ankle-Brachial Index (ABI) values among patients with Type II Diabetes Mellitus. Buerger Allen Exercise can be considered a non-pharmacological nursing intervention that is easy, safe, simple, and cost-effective in helping to enhance peripheral blood circulation and prevent diabetic foot complications in patients with Type II Diabetes Mellitus.

Keywords: Type II Diabetes Mellitus, peripheral perfusion, Buerger Allen Exercise, Ankle Brachial Index.

¹Nursing Student of Yogyakarta Ministry of Health Polytechnic

^{2&3} Nursing Lecturer of Yogyakarta Ministry of Health Polytechnic

PENERAPAN *BUERGER ALLEN EXERCISE* UNTUK
PENCEGAHAN LUKA KAKI DIABETIK PADA
PENDERITA DIABETES MELLITUS TIPE II
DI RSUD PANEMBAHAN SENOPATI
BANTUL

Fathonah Dwi Anggraeni¹, Sapta Rahayu Noamperani², Abdul Majid³
Nursing Department of the Yogyakarta Ministry of Health polytechnic
Jl. Tata Bumi No. 3 Banyuraden, Gamping, Sleman, Yogyakarta

Email: fdwianggraeni1405@gmail.com

ABSTRAK

Latar Belakang: Diabetes Melitus tipe II merupakan salah satu penyakit metabolik kronis yang ditandai dengan peningkatan kadar glukosa darah akibat gangguan sekresi insulin, resistensi insulin, atau keduanya. Salah satu intervensi nonfarmakologis yang dapat dilakukan untuk membantu meningkatkan sirkulasi darah perifer adalah Buerger Allen Exercise (BAE). Buerger Allen Exercise merupakan latihan aktif pada ekstremitas bawah melalui perubahan posisi dan gerakan otot yang bertujuan meningkatkan aliran darah perifer.

Tujuan: Menerapkan Buerger Allen Exercise untuk meningkatkan perfusi perifer pada pasien Diabetes Melitus tipe II di RSUD Panembahan Senopati Bantul.

Metode: Penelitian yang digunakan adalah studi kasus deskriptif dengan pendekatan asuhan keperawatan pada dua pasien yaitu Ny. N dan Ny. S yang mengalami perfusi perifer tidak efektif. Intervensi Buerger Allen Exercise dilakukan selama empat hari berturut-turut dengan frekuensi dua kali sehari pada pagi dan sore hari selama 15–20 menit. Evaluasi dilakukan melalui observasi kondisi pasien, pemeriksaan kadar gula darah sewaktu (GDS), dan pengukuran nilai Ankle Brachial Index (ABI) sebelum dan sesudah intervensi.

Hasil: studi kasus menunjukkan adanya peningkatan perfusi perifer pada kedua pasien setelah dilakukan Buerger Allen Exercise secara rutin. Selain itu kedua pasien mengatakan keluhan kesemutan berkurang, kaki terasa lebih hangat, dan lebih nyaman saat beraktivitas. Hasil observasi juga menunjukkan adanya perbaikan suhu ekstremitas dan penurunan tanda gangguan perfusi perifer.

Kesimpulan: Penerapan Buerger Allen Exercise terbukti dapat meningkatkan perfusi perifer yang dilihat dari nilai *ankle brachial index* pada pasien Diabetes Melitus tipe II. Buerger Allen Exercise dapat dijadikan sebagai salah satu intervensi keperawatan nonfarmakologis yang mudah, aman, sederhana, dan ekonomis dalam membantu meningkatkan sirkulasi darah perifer serta mencegah komplikasi kaki diabetik pada pasien Diabetes Melitus tipe II.

Kata Kunci: *Diabetes Melitus tipe II, perfusi perifer, Buerger Allen Exercise, Ankle Brachial Index.*

¹*Nursing Student of Yogyakarta Ministry of Health Polytechnic*

^{2&3} *Nursing Lecturer of Yogyakarta Ministry of Health Polytechnic*