

Efficacy of Buerger-Allen Exercise with Microcurrent Therapy on Promoting Wound Healing in Individuals with Diabetic Foot Ulceration

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Abstract

Introduction: Diabetes mellitus will increasingly contribute to the years of life and disability worldwide. Diabetes mellitus is a clinical condition characterized by high blood sugar levels due to insufficient insulin production or utilization. Buerger-Allen exercise is an active postural exercise that promotes lower extremity perfusion (LEP), promoting wound healing and neuropathy symptoms. Microcurrent therapy is the application of microamperage electrical stimulation, which beneficially encourages wound healing. This study aims to assess the effectiveness of the microcurrent therapy with Buerger-Allen exercise in wound healing and quality of life among patients with diabetic foot ulcers.

Methods: A Sample of 20 was selected. The participants were recruited from Saveetha Hospital. Baseline measurements were taken before randomly assigning participants to the treatment groups. The intervention group (n=10) was given Buerger-Allen exercise with Microcurrent therapy for 4 days a week for 4 weeks, 20-30 minutes per session, while the control group(n=10) had a conventional intervention for 4 days a week for 4 weeks. Pre-test and post-test data were collected from subjects with diabetic foot ulcers, meeting the inclusion and exclusion criteria, and analysed.

Results: The subjects underwent the prescribed intervention, and the data collected were analyzed statistically for pre and post-values of Acetate Tracing. The treatment resulted in a more significant change than would be predicted by chance. The difference is statistically significant ($P < 0.0001$).

Conclusion: The Buerger-Allen exercise with microcurrent therapy significantly improved peripheral blood circulation by promoting wound healing, thus increasing the Acetate Tracing score, which was higher than the control group.