

PODIATRIC RESEARCH

Anodyne Light Therapy Does Not Improve Peripheral Neuropathy In Diabetes: Study

Does Anodyne light therapy improve peripheral neuropathy in diabetes? A double-blind, sham-controlled, randomized trial to evaluate monochromatic infrared photoenergy. Lavery LA, Murdoch DP, Williams J, Lavery DC

Objective: The purpose of this study was to determine the efficacy of anodyne monochromatic infrared photo energy (MIRE) in-home treatments over a 90-day period to improve peripheral sensation and self-reported quality of life in individuals with diabetes.

Research Design and Methods: This was a double-blind, randomized, sham-controlled clinical trial. We randomly assigned 69 individuals with diabetes and a vibration perception threshold (VPT) between 20 and 45 V to two treatment groups: active or sham treatment. Sixty patients (120 limbs) completed the study. Anodyne units were used at home every day for 40 min for 90 days. We evaluated nerve conduction velocities, VPT, Semmes-Weinstein monofilaments (SWM) (4-, 10-, 26-, and 60-g monofilaments), the Michigan Neuropathy Screening Instrument (MNSI), a 10-cm visual analog pain scale, and a neuropathy-specific quality of life instrument. We used a nested repeated-measures multiple ANOVA design. Two sites (great toe and fifth metatarsal) were tested on both the left and right feet of each patient, so two feet were nested within each patient and two sites were nested within each foot. To analyze the ordinal SWM scores, we used a nonparametric factorial analysis for longitudinal data.

Results: There were no significant differences in measures for quality of life, MNSI, VPT, SWM, or nerve conduction velocities in active or sham treatment groups ($P > 0.05$).

Conclusions: Anodyne MIRE therapy was no more effective than sham therapy in the treatment of sensory neuropathy in individuals with diabetes.

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