

Microcurrent Stimulation in the Treatment of Dry and Wet Macular Degeneration

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Abstract

Purpose

To determine the safety and efficacy of the application of transcutaneous (transpalpebral) microcurrent stimulation to slow progression of dry and wet macular degeneration or improve vision in dry and wet macular degeneration.

Methods

Seventeen patients aged between 67 and 95 years with an average age of 83 years were selected to participate in the study over a period of 3 months in two eye care centers. There were 25 eyes with dry age-related macular degeneration (DAMD) and six eyes with wet age-related macular degeneration (WAMD). Frequency-specific microcurrent stimulation was applied in a transpalpebral manner, using two programmable dual channel microcurrent units delivering pulsed microcurrent at 150 μ A for 35 minutes once a week. The frequency pairs selected were based on targeting tissues, which are typically affected by the disease combined with frequencies that target disease processes. Early Treatment Diabetic Retinopathy Study or Snellen visual acuity (VA) was measured before and after each treatment session. All treatment was administered in a clinical setting.

Results

Significant increases were seen in VA in DAMD ($P=0.012$, Wilcoxon one-sample test), but in WAMD, improvements did not reach statistical significance ($P=0.059$). In DAMD eyes, twice as many patients showed increase in VA (52%) compared to those showing deterioration (26%), with improvements being