

RESTORATION OF CUTANEOUS SENSORIUM IN NEUROPATHY UTILIZING A NOVEL PHARMACOLOGICAL APPROACH

First Author: Mackie J. Walker, Jr.

Authors: Mackie J. Walker, Jr., DPM, FACFAS, FAPWCA, Lauren M. Morris, PMAC

Background

The purpose was to evaluate quantitative neural response in patients with sensorimotor neuropathy to an oral tablet consisting of 2.8mg L-methylfolate, 25mg Pyridoxal 5'-phosphate, and 2mg methylcobalamin.

Methods

Thirty-one patients with established sensory loss were measured/quantified for a baseline study utilizing the Pressure Specified Sensory Device™ measuring the great toe pulp and medial heel of both feet, one-point and two-point static measured in Gm/mm². Therapy was introduced in a load of 2 pills per day for 2 weeks then 1 per day. Then outcome measurements were compared to baseline after six and/or twelve months. The study population decreased per established exclusion.

Results

The study compares baseline vs. after six month of treatment and baseline vs. after one year treatment for all eight measurements.

Twelve subjects have 6-month follow-up outcome data. Eight participants have diabetic neuropathy, three peripheral, and one post-chemotherapy. Average age is 61 years of old.

Eleven patients have one-year follow-up outcome data. Average age is 58. All patients have diabetic neuropathy except for one who is peripheral.

The hypothesis is improvement in sensory loss after one-year of combination therapy is greater than zero compared with baseline measurement. Compared to the baseline sensory loss was significantly reduced (*p*-Value <0.001) in both feet in all patients after therapy.

Conclusion

Overall, this novel combination of 2.8mg L-methylfolate, 25mg Pyridoxal 5'-phosphate, and 2mg Methylcobalamin demonstrated a significant improvement in regenerating nerve fibers resulting in the restoration of sensation in patients with neuropathy. This therapy should be considered in the treatment plan of patients with sensorimotor neuropathy.