ELECTROCEUTICAL TREATMENT AND RESOLUTION OF:

DIABETIC NEUROPATHY, ARTERIAL ISCHEMIA, STENOSIS, AND PROGRESSIVE GANGRENE

284 DIABETIC PATIENT CLINICAL STUDY AND CUMULATIVE RESEARCH DATA REPORT

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ABSTRACT:

A group (A) of 284 diabetic patients with severe Diabetic Neuropathy experienced analgesic relief of nocturnal pain and regained normal vascularization, normal sensation, and normal EMG following a series of specific-parameter electroceutical treatments. Included in this cumulative report of 284 diabetic patients, 194 (B) presented with moderate to severe arterial ischemia and/or stenosis, and 27 (C) patients with total occlusion (progressive gangrene). Overall, (A) 247 patients (87%) reported total recovery treatment success or a *definite* positive influence with their condition (i.e., pain resolution, vascular change, new tissue growth, etc.). Although 28 patients in group (B) and 9 patients in group (C) reported no substantial improvement with their overall condition, all described some favorable influence and thought the treatment was worthwhile.

Keywords: Electroceutical treatment; Vascularization, Diabetic Neuropathy; Arterial Ischemia; Stenosis; Progressive Gangrene

INTRODUCTION:

The electroceutical treatment approach is based on the application of controlled, specific-parameter electrical impulses. Electrical current is altered via special step-down transformers into electric impulses that mimic the human bioelectric system.

Despite the complexity of the nervous system as a whole, the structure and function of individual nerve cells is understood in great detail - more than any other type of cell. It is well known that electric impulses are conducted along the length of every nerve cell and that their function is to code and transmit all biophysiological information by varying the frequency of their occurrence.

Well documented research efforts in the field of clinical electromedicine by Doctors - Sorgnard, May, Hansjurgens, Schwartz, and the Clinical Electromedical Research Academy (CERA) have helped to bring about a less confusing view of electromedical science. Electromedicine is now categorized into two (2) different, distinct classifications based upon comparing and merging the physiological effects produced via

specific bioelectric pulses with the desired biophysiological effects necessary for medical treatment success. The two (2) electromedical classifications are:

The ***Stimulatory Class:*** Physiological effects induced by repeated action impulse propagation in excitable cells - cell membrane depolarization and repolarization activity.

Multi-facilitory Class: Physiological effects induced without repeated action impulses. Some mechanisms known are; hormone/ligand imitation, cellular oscillo/torsional response, ionic transport (D.C.), sustained membrane depolarization, second messenger formation, et cetera.

With continued research comes great insight into the most accurate electroceutical parameters or the proper combination of the two (2) known electromedical classes necessary to facilitate optimum patient treatment success.

DISCUSSION:

Clinical treatment application of specific bioelectric impulses in peripheral vascular disease with an endocrine etiology has been evaluated in 284 participating diabetic patients. Pursuant to the electroceutical treatment parameters and guidelines requested by the attending research physicians, all patients were administered specific electroceutical treatments.

Initial treatments consisted primarily of the *Multi-facilitory Class (Mf)* of electroceuticals because of the direct association with second messenger formation (cyclic AMP), which activates the regeneration (repair) processes; the cellular oscillo/torsional response with assists in balancing metabolic concentration differences (pH normalization); enhanced filtration and diffusion processes (mitigation of tissue acidosis) and potent analgesia.

While Multi-facilitory (Mf) treatments are applied, neuron blockade occurs - resulting in potent analgesia. Longer-lasting analgesia is accomplished through a balance of metabolic concentration differences and increased enzyme synthesis. As a result of increased activation energy and of the cellular oscillo-torsional response, metabolic end products and pain and inflammation mediators are redistributed and more efficiently eliminated by the body.

In diabetes, accumulation of sorbitol in Schwann cells causes osmotic damage with segmental demyelination. Peripheral nerves are probably affected by small vessel disease. Ischemental changes in the nerve presumably result from proliferation of the endothelium in blood vessels and abnormalities of the capillaries.

As treatment progresses, protocols of alternating *Stimulatory Class (St)* electroceuticals *and Multi-facilitory Class (Mf)* electroceuticals are initiated to ensure a maximum range of bio-physiological effects. Such effects are reflected by the changes in the activity of acetyleholinesterase. The effect of catecholamines, which is evidenced by an anti-curare effect and also by he ability to augment the repetitive firing and twitch potentiation produced by neostigmine and other drugs, is presumably due to the ability of bioelectric energy stimulus to increase the release of acetylcholine at nerve endings. Vasodilation produced by stimulus to increase the release of acetylcholine at nerve endings. Vasodilation produced electroceutical treatment has distinct analgesic and revascularization effects, which lead to rapid improvement of blood supply and elimination of pain in lesions of peripheral myelinated nerves.

SAMPLE CASE HISTORY:

A 47-year old female patient with diabetes developed severe neuropathy manifested by complete bilateral loss of sensation and of vibration and position senses in the lower extremities, accompanied by deep pain characterized by throbbing. Three weeks after the appearance of these symptoms she developed arterial stenosis of the left foot with evidence of total occlusion. A blister on one (1) toe developed into progressive gangrene, for which an orthopedist advised amputation of the toe. Antibiotics were administered as part of routine treatment and the patient was started on multi-facilitory (Mf) electroceutical treatments BID 20 minutes each.

After 8 treatments revascularization started characterized by complete return of sensation, cessation of pain, reduced inflammation, and arrest of the progressive gangrene. The protocol treatment was changed to an alternation between *Stimulatory (St) Class* and *Multi-facilitory (Mf) Class* electroceutical treatment. After 10 treatments, complete arrest of gangrene with new growth of tissue was noted, all pain was relieved and pharmaceutical analgesics were withdrawn. EMG prior to electroceutical treatment indicated a reduced number of motor unit waveforms with increased duration and amplitude -- fibrillation potential and positive sharp waves were also apparent. Repeat EMG appeared normal, with no fibrillation or denervation potentials. The patient continued to receive treatment intermittently (2 times weekly). Fasting blood sugar level remained the same and the patient continued regular pharmacological therapy and diet. The single most common finding was the return of normal deep tendon reflexes with normal knee and ankle jerk in all patients. At a one-year follow-up, the patient is still clinically free from pain and shows no significant vascular pathology.

SUMMARY AND CONCLUSION:

Our clinical experience and patient trial data has shown that the application of electroceutical treatment with specific electroceutical parameters favorably influences the peripheral vasculature - promoting nerve and cell nutrition while, stirnulation of motor nerve fibers results in excitation of the muscle fibers. This has two effects on the blood flow: energy is used up, the metabolic rate is increased, and blood flow in enhanced in the region of stimulating muscles. In addition, through the contraction activity of the muscle group, an active stimulation of the venous backflow occurs. Also, electroceutical applications directly influences blood flow and lymph transport via sympathetic function imitation. Exogenous stimuli at specific pulse rates induce synchronous synaptic release of the neurotransmitter, Norepinephrine without depletion. Norepinephrine reacts with Alpha-receptors causing contraction of vessel smooth muscle. Vasoconstriction is necessary to treat the inflammation and edema normally present in diabetic neuropathy patients. Vasoconstriction achieves these effects by pushing intravascular fluid in a central direction to the heart, reducing the influx from arteries and enabling the extra-capillary fluid to penetrate the intravascular space to improve the drainage function of the capillary system.

Asymmetric neuropathy or mononeuropathy is due to metabolic abnormalities of the neurons of Schwann cells, whereas symmetric or focal neuropathy is due to vascular occlusion and ischemia. Ulcers on the plantar aspect of the foot in Charcot joint neuropathy are due to weakness of the intrinsic muscles of the foot and consequent abnormal pressure distribution. Therefore, timely application of electroceutical treatment is not only effective with respect to peripheral vascular dilation, it appears that it improves or strengthens the intrinsic muscles of the foot, relieving abnormal pressure distributions. We also believe the results achieved with electroceutical treatment are as effective as aldose reductase inhibitors and glycosylation.

There appears to be enough evidence to encourage the use of electroceutical treatment in all diabetic neuropathy, arterial ischemia, arterial stenosis and progressive gangrene. These specific treatments, especially the alternation of Stimulatory Class (St) electroceuticals and Multi-facilitory (Mf) electroceuticals, have placed us at the threshold of discovery and its time to apply this knowledge in other clinical settings.

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