

THE ELECTRO-ACUSCOPE / MYOPULSE SYSTEM

State-of-the-Art Bio-Energetic Medicine

Feedback-Modulated Micro-Current Neuro-Muscular Therapy



Manufactured by

Biomedical Design Instruments, Inc.
Since 1978

Report of Research and Studies Regarding the Acuscope System

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Introduction



The Electro-Acuscope and Myopulse are state-of-the-art micro-current modalities. However, because of the wide variety of probes and electrodes allowing for widely varying applications, the operator interactive and biofeedback-modulated treatment procedures, as well as the fact that one instrument (Acuscope) addresses the nervous system while the other (Myopulse) addresses connective, contractile tissue, the system has had limited research performed since it was released in 1978.

Treatment with these unique modalities is based on moment-to-moment feedback from living tissue – both in terms of operator controls and instrument self-modulation. Setting up a double-blind study and including a controlled patient population where neuro-muscular and musculo-skeletal pain complaints are identical further offers major challenges to research.



That being said, to date there have been several attempts to report the effects of therapy with the Acuscope/Myopulse System. These are as follows (please note – pdf Bookmarks allow navigation of this document; complete works in attached file):

1. Impedance Controlled Microcurrent for Managing Fibrosis in Cancer Patients – ElSevier
2. Medical Acupuncture Feedback-Modulated – by Braun MD
3. Post-Polio Syndrome Study – by H'Doubler
4. Picker-Scott Double-Blind Study
5. F.P Meyer M.D. and Anthony Nebrensky PhD Double-Blind Study
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1. Impedance Controlled Microcurrent for Managing Fibrosis in Cancer Patients – ElSevier

PILOT STUDY OF IMPEDANCE-CONTROLLED MICROCURRENT THERAPY FOR MANAGING RADIATION-INDUCED FIBROSIS IN HEAD-AND-NECK CANCER PATIENTS

Purpose: To evaluate the effectiveness of impedance-controlled microcurrent therapy for managing treatment sequelae in head-and-neck cancer patients.

Methods and Materials: Between January 1998 and June 1999, 26 patients who were experiencing late effects of radiotherapy were treated b.i.d. with impedance-controlled microcurrent therapy for 1 week. Objective range of motion measurements were made for cervical rotation, extension/flexion, and lateral flexion before therapy, at the end of each treatment day, and monthly for 3 months. In addition, each patient's subjective complaints were tabulated before treatment and reevaluated at the last follow-up visit. No additional physical therapy or electrical stimulation was permitted during the follow-up period.

Results: At the end of the course of microcurrent therapy, 92% of the 26 patients exhibited improved cervical rotation, 85% had improved cervical extension/flexion, and 81% had improved cervical lateral flexion. Twenty-two patients returned for the 3-month follow-up visit. Of these, 91% had maintained a cervical rotation range

of motion greater than their pre-therapy measurements. Eighty-two percent maintained improved cervical extension/flexion and 77% maintained improved lateral flexion. When the range-of-motion measurements were stratified by pretreatment severity (severe, moderate, mild, or asymptomatic), the degree of improvement directly correlated with the severity. Thus, patients who had more severe initial symptoms experienced a higher percentage of improvement than did those with milder symptoms. For these patients, the cervical rotation range of motion changed from a baseline of $59^{\circ} \pm 12^{\circ}$ to $83^{\circ} \pm 14^{\circ}$ at 3 months; flexion/extension improved from $47^{\circ} \pm 10^{\circ}$ to $73^{\circ} \pm 13^{\circ}$; and lateral flexion went from $31^{\circ} \pm 7^{\circ}$ to $48^{\circ} \pm 9^{\circ}$. Some patients also reported symptom improvement for tongue mobility, facial asymmetry, xerostomia, cervical/facial muscle spasms, trismus, and soft tissue tenderness. No adverse effects were observed.

Conclusion: Impedance-controlled microcurrent therapy shows promise for remediation of range-of-motion limitations arising as late effects of radiotherapy for head-and-neck cancer. Additional studies are needed to validate these preliminary results and to optimize the microcurrent treatment protocol, particularly with respect to treatment schedules and combining microcurrent therapy with physical and/or drug therapy. © 2002 Elsevier Science, Inc.

The following is an excerpt from this study:

“It is well-known that the body’s impedance changes when electrical current passes through it. The more sophisticated devices contain circuitry that monitors impedance and adjusts the output current to compensate for changes. These devices also deliver fast rise time pulses that can affect voltage sensitive sodium and calcium ion channels (6). The Electro-Myopulse and Electro-Acuscope instruments (Biomedical Design Instruments, Burbank, CA) chosen for this study deliver impedance-controlled, fast rise time pulses. Their retail price is about \$8500 each. Electrotherapy treatments are reimbursable under established billing codes. Typical charges to a patient are \$40-\$50 per 15-min treatment. However, patients in this study were not charged for the therapy.”

2. Medical Acupuncture Feedback-Modulated by Braun

Feedback-Modulated **Microcurrent** in Acupuncture Treatment

William P. Braun III, MD

ABSTRACT

Background Acupuncture point stimulation with both needles and transcutaneous **microcurrent** can be combined in the same treatment session. **Microcurrent** devices with feedback modulation characteristics offer theoretical advantages over those without them.

Objective To describe the outcomes of patients treated with acupuncture and transcutaneous feedback-modulated **microcurrent**.

Design, Setting, and Patients Four patients received treatment at a physician acupuncturist's practice. Two patients had chronic limb pain, 1 had acute migraine headache, and 1 had chronic depression.



Figure 1. Electro-Acuscope Model 80C (circa 1991)

Intervention A combination of acupuncture and acupuncture point stimulation with transcutaneous feedback-modulated **microcurrent**.

Main Outcome Measures Patient reports of pain level, activity level, and use of medication.

Results Chronic pain patients: 1 (disabled) patient had complete pain relief and returned to work, 1 experienced significant pain relief. The patient with acute headache had complete pain relief. The patient with depression was able to discontinue her medication.

Conclusions Acupuncture point stimulation with a combination of needles and transcutaneous feedback-modulated **microcurrent** can be used to satisfactorily treat a variety of conditions.

For purposes of this report, Case Four is of particular interest:

A 64-year-old woman presented with a history of longstanding depression, treated with imipramine hydrochloride for 2 decades, up to 150 mg/d. All attempts to wean her from medication had failed since return of severe symptoms required resumption of the medication.

Diagnosis

Major depression.

Treatment

Initially, imipramine was continued at 75 mg/d. The patient was treated weekly with acupuncture, sometimes biweekly, for nearly 3 months. . . . Moreover, during this period, she was treated with **microcurrent** stimulation . . .

Results

Treatment continued as delineated above; the patient was slowly weaned from imipramine in 10-15 mg increments, biweekly. The medication was discontinued within 2 months. The patient was treated at 2-4 week intervals, 50 minutes per session, using cranial electrotherapy stimulation (**microcurrent** brain stimulation via earclip electrodes) with **microcurrent** stimulation. Her condition has remained stable for more than 8 years.

3. Post-Polio Syndrome Study by H'Doubler

H'Doubler_FT_Jr1 (1996) **A Clinical Report: The Treatment of Post-Polio Syndrome (PPS) with electrostimulation of Ear-AP points: An evaluation of 12 Patients: Part 1**. Adapted from WWW. Dr FT H'Doubler Jr MD, 1900 South National, Suite 2950, Springfield, Missouri 65804-2240, FAX (417) 882-3210, Voice (417) 882-3066, EMail: hdoubler@smartnet.net

Poliomyelitis.

Polio is one of the oldest diseases of mankind. Polio came into prominence in the USA in the dreaded summers of the 1930s, 40s, and 50s when we had such horrible epidemics. Fortunately in 1955, the Salk Vaccine became available and this brought the dreaded disease under control in the USA.

In those days, we were not aware that many polio survivors would develop new symptoms 15-40 yr later. These symptoms were severe fatigue, pain, and muscle weakness. Many of these patients also experienced cold intolerance, insomnia, depression, anxiety, respiratory problems, short attention span, etc.

The usual scenario was that the patient would consult with his or her family doctor regarding these symptoms, had a Med evaluation and possibly a neurological examination, and finally be advised to see a psychiatrist.

Abstract.

The objective of this study was to evaluate the effectiveness of Ear-**EAP** (using a non-invasive Electro-Acuscope) to treat confirmed post-polio Syndrome (PPS) patients. Short and Long term responses in 12 study subjects were measured. Good or excellent results were obtained in all patients; 67% reported a return to their pre-existing levels of health. In our experience, Ear-**EAP** is effective as a permanent, relatively simple and inexpensive form of therapy for many cases of PPS. This seems to be the first effective therapy available for the >75000 PPS patients in the USA alone.

EAP-therapy of Ear- and odonton (gumline) points was done in all cases, using the feedback-controlled Electro-Acuscope [Manufacturer: Bio-Medical Design Instruments, Inc. Burbank, CA]. It was used to both locate each Ear-point (search mode) and to stimulate each point (treatment mode).

Each patient also received transcranial stimulation performed with electrode clips attached at the earlobes. The settings on the Electro-Acuscope were 200 μ A at 8 Hz for 20 min. (The objective of this procedure is to create homeostasis in the ANS. The patient immediately becomes very relaxed and quite often falls asleep. After this treatment, the patient will often feel increased energy and general well-being.).

4. Picker-Scott Double-Blind Study

AN INFORMAL DOUBLE-BLIND STUDY TO EVALUATE MUSCLE STRENGTH In Athletes Treated with the MYOPULSE (Impedance-Controlled Micro-Current Muscle Stim) by Jack Scott, Ph.D., and Robert Picker, M.D.

In an informal study by Drs. Jack Scott and Robert Picker, an evaluation of the promise that athletic strength and conditioning could be improved by the use of the Myopulse was very positive. Their report concludes:

All fifteen subjects in the treatment group reported significant strength increases as well as greater performance during their workouts. The subjects in the control group reported minimal strength increases and/or performance enhancement. These results positively support the claim that the Myopulse can improve strength in athletes.

5. F.P Meyer M.D. and Anthony Nebrensky PhD Double-Blind Study

Micro Stimulation and Placebo Effect; In Short Treatment of the Chronic Back Pain Patient. F.P. Meyer, MD and Anthony Nebrensky, Ph.D.

Forty subjects with chronic back pain were divided into two groups--one received real microcurrent electrical stimulation with the Electro-Acuscope, and the other placebo. The subjects in the real group experienced an average pain reduction of 37.26% greater than the placebo group. A two-month follow-up showed a significant difference: 75.22% pain reduction in the group that had actually received treatment, and 6.3% pain reduction in the placebo group.

6. Treatment of Trigger Points with Microamperage Acuscope

Treatment of Trigger Points in the neck and shoulder region with Microamperage Transcutaneous Electrical Nerve Stimulation (TENS)--(The Electro-Acuscope 80). Results: higher change of Trigger Point indicators in those receiving actual treatment in comparison to placebo. Study concludes that microamperage stimulation is effective in the treatment of Trigger Points.

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[Walton H.](#)

One-half of the students taking part in a double-blind study received a microamperage electrical stimulation of trigger points in the neck and shoulder region with the Electro-Acuscope 80. All the subjects were evaluated by digital palpatory physical examination for the presence of trigger points before each of their treatments. Results indicate that the subjects who received treatment had a higher change of trigger-point indicators compared to those receiving the placebo treatment. A two-tailed t-test indicated significant results (P less than 0.001). It appears that microamperage electrical stimulation is effective in the treatment of trigger points.

7. Article: Carpal Tunnel Syndrome Treated with Acuscope in Manufacturing Plants

The National Institute of Occupational Safety and Health has reported that as many as 20 million workers hold jobs considered to be high risk for a widespread epidemic of carpal tunnel syndrome and other repetitive motion injuries. Carpal tunnel syndrome (CTS) is caused by compression of the median nerve as it passes through the wrist resulting in 50% of all reported injuries nationwide. Symptoms include pain, numbness, tingling, and loss of grip strength. If left untreated, the damage is cumulative, and the results can be permanent. Anyone performing a repetitive task with their hands is susceptible. The Electro-Acuscope/Myopulse system has shown a high degree of success for all repetitive motion injuries. In fact, several prominent companies including AT&T, Dow Chemical, Hormel, Swift-Eckrich, and Heinz Foods, have installed these units in their plant's medical departments, and report significantly lowered levels of lost time and necessary surgeries.

8. Results of Pub Med Search for Acuscope

See Document.

9. Results of Healthcare Links Search for Acuscope

See Document.

10. Cranial Electrical Stimulation with the Electro-Acuscope Photo-Illustrated

See Document.

11. Decubitus Ulcer Photo-Illustrated Case Report

See Document.

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[Related Articles, Links](#)

Healing of decubitus ulcers of patients in neuro-kinesthetic program with the Electro-Acuscope 80.

Crit Care Update. 1983 Mar;10(3):50-2. No abstract available.

PMID: 6601565 [PubMed - indexed for MEDLINE]