

Cytokine changes with microcurrent treatment of fibromyalgia associated with spine trauma

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Purpose: Patients who have Fibromyalgia syndrome (FMS) related to spine trauma have moderate to severe pain levels and distinct pain descriptors and physical examination findings. Currently there is no effective treatment for this type of fibromyalgia. Microamperage current provides physiologic current flow and has been utilized in the treatment of pain syndromes. Two frequencies, 40 Hz and 10 Hz were observed to scale back pain in FMS related to spine trauma. This retrospective analysis of patients receiving micro-current treatment for FMS related to spine trauma uses subjective pain scores as a primary outcome measure. Accompanying changes in inflammatory cytokines are examined in a subgroup of the same patient population to test the hypothesis that micro-current treatment using two specific frequencies produces substantial measurable objective and subjective outcomes supporting the efficacy of this treatment.

In general, treatments for fibromyalgia include both medication and self-care. The emphasis is on minimizing symptoms and improving general health. No one treatment works for all symptoms.

Medications.

Medications can help reduce the pain of fibromyalgia and improve sleep. Common choices include:

- Pain relievers. Over-the-counter pain relievers such as acetaminophen (Tylenol, others), ibuprofen (Advil, Motrin IB, others) or naproxen sodium (Aleve, others) may be helpful. Your doctor might suggest a prescription pain reliever like tramadol (Ultram). Narcotics aren't advised, because they will cause dependence and should even worsen the pain over time.
- Antidepressants. Duloxetine (Cymbalta) and milnacipran (Savella) may help ease the pain and fatigue related to fibromyalgia. Your doctor may prescribe amitriptyline or the relaxant cyclobenzaprine to assist promote sleep.
- Anti-seizure drugs. Medications designed to treat epilepsy are often useful in reducing certain sorts of pain. Gabapentin (Neurontin) is usually helpful in reducing fibromyalgia symptoms, while pregabalin (Lyrica) was the primary drug approved by the Food and Drug
- Physical therapy. A physiotherapist can teach you exercises which will improve your strength, flexibility and stamina. Water-based exercises might be particularly helpful.
- Occupational therapy. An occupational therapist can assist you make adjustments to your work area or the way you perform certain tasks which will cause less stress on your body.

Methods: A complete of 54 consecutive patients meeting the ACR diagnostic criteria for fibromyalgia were treated with two frequencies, 40Hz and 10Hz on a two channel microamperage current device. Blood samples on a subset of six patients were analyzed employing a recycling immune affinity chromatography system to spot objective changes accompanying subjective pain scores. Five patients did not tolerate treatment. The remaining 49 patients reported reduction in pain on a 10-point visual analog scale (VAS) from a mean baseline score of seven $.3\pm 1.2$ to 1.3 ± 1.1 with the primary treatment.

Results-Five patients did not tolerate treatment. The remaining 49 patients reported reduction in pain on a 10-point visual analog scale (VAS) from an average baseline score of 7.3 ± 1.2 to 1.3 ± 1.1 with the first treatment. (Prospective clinical studies to evaluate the clinical efficacy of microcurrent treatment of FMS associated with cervical spine trauma are warranted.

Keywords- Fibromyalgia,Chronicpain,Cervical spine trauma,Microcurrent,Pro-inflammatory cytokines

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