

SELF-CONTROLLED ENERGY NEURO-ADAPTIVE REGULATOR FOR THE TREATMENT OF MUSCLE INJURIES

Valeyeva-Frost Z

The Scenar Training Centre, London, UK

The Self-Controlled Energy Neuro-Adaptive Regulator (Scenar) represents a new generation of non-invasive health technologies which are directed at activating the self-healing resources of the human body for pain relief. Its action (1) is performed in three ways: 1) by providing a new signal, dominant focus is formed in the cortex, which causes de-localisation of the previously dominant focus of pain and activates the parasympathetic nervous system; 2) by changing the sensitivity and decreasing the lability in the thick A and thinner C nerve fibres. The faster A fibres depolarise the substantia gelatinosa (glial cells) and pain impulses arriving via the C fibres are prevented from continuing (Gate theory) and 3) by activating cortical and sub-cortical centres to send descending efferent impulses that increase blood flow and stimulate local humoral mechanisms, the production and release of endorphins and increasing the activity of enzymes, such as acetyl cholinesterase, histaminase and kinases.

Technical characteristics

Scenar is an electrical device operating on 9V battery, producing biphasic impulse current without constant. Scenar has a built in by-polar electrode and operates in two therapeutic modes: continuous (Diag 0) and measuring (Diag 1) and also has many parameters for individual adjustment. The Scenar has been tested and found to comply with the requirement of IEC 60606-1 *Medical Electrical Equipment – Part 1: General Requirements for Safety*. Unique technical characteristics are: high amplitude; pulsing current preventing from accommodation; a short, non-damaging action; the high curve of the front of the action signal enable stimulation of the C-fibres (0.5 mkm), these are the thinnest structure of all known nervous fibres; biofeedback cybernetic loop, enabling the body to control Scenar output: each impulse is different from previous. This prevents the body from adapting to the signal before there has been time to generate sufficient neuropeptides to relieve pain and to create an enhanced environment for shift towards homeostasis.

Methods

Twenty-five patients affected by muscular pain, muscular spasm, muscular sprain, muscular atrophy, inflammatory myopathy and fibromyalgia were studied.

The diagnosis was done by ultrasound or based on clinical manifestation. Some patients had accompanied haematomas.

Modalities of treatment used both Diag 0 and Diag 1. Techniques of first and second level – working locally, on collateral side and general zones. Each treatment lasted 35 minutes. The number of sessions was set depending on the pathology and resulted between 7 and 21 (muscular atrophy) sessions. During the therapy the patients does not used any anti-inflammatory and pain control drugs. Patients receiving Steroids were excluded. All the patients received supportive physical therapy.

Before the start and after the last application of the Scenar therapy pain, range of movement, strength and quality of the sleep were evaluated.

Results and discussion

All the patients showed a significant pain relief, a functional improvement in daily activities, an increased range of movement and a better quality of the sleep.

The data of the present study indicate that Scenar Therapy is effective for pain relief and for accelerated recovery after muscular injury.

References

1. Filimonov RA et Al. Testing of the SKENAR-032 apparatus (a neuroadaptive electrostimulator) *Vopr Kurortol Fizioter Lech Fiz Kult* 5:62-3, 1993.
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