Clinical study on the use of *BICOM* resonance therapy on overstrain syndrome in top sportsmen

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Introduction

The organism's biophysical processes are fundamental characteristics which are present in all organisms and are superordinate to biochemical processes. The frequency range extends from very short to the extremely long wave range. The body creates a dynamic equilibrium between physiological and pathological oscillations through auto-regulation. A disturbed auto-regulation system manifests itself as disease.

The principle of *BICOM* resonance therapy consists of acting on processes such as this with endogenous physiological and inverted pathological electromagnetic oscillations in order to restore the body's dynamic equilibrium.

The purpose of this study is to test the effectiveness of *BICOM* resonance therapy on overstrain syndrome in top sportsmen compared with the conventional treatment.

Research group

The study was carried out by Dr. med. Breda Jesensek Papcz and Dr. med. prim. Joze Barocic under the direction of Prim. Dr. sci. Dr. med. Zmago Turk at the Maribor teaching hospital in Slovenia. The sportsmen with overstrain syndrome (footballers, athletes, sprinters, hurdlers, etc.) were divided into two groups, each containing 12 individuals.

Control group 1 was treated with conventional methods such as ultrasound on the pain site, electro-stimulation, cryotherapy and locally also with antirheumatic agents (voltaren gel).

Experimental group 2 was treated with *BICOM* resonance therapy, namely basic program and *sports injury* follow-up program with the therapy parameters adapted to the individual in accordance with energetic testing. Individually treated bioresonance oil was also applied locally.

Both groups of sportsmen were recommended to take a break from training to relieve the body until the syndrome was alleviated.

Assessing pain and therapeutic results

The success of the treatment was evaluated using a visual analogue scale (VAS) and accompanying clinical status. The VAS is a simple, one-dimensional scale commonly used in medicine. To determine the severity of the pain, it is divided into 10 stages from 0 (no pain) to 10 (maximum conceivable pain). Admittedly the pain is perceived subjectively but this subjective estimation is necessary to judge how successful therapy has been and has proved useful in practice. It is simple and quick and consequently the most widely used method for determining the severity of pain and how treatment is progressing.

To carry out an accurate assessment, it is first carefully explained to the patient that stage 0 means "no pain" and that 10 is the maximum pain rating the patient can imagine for his situation.

Treatment

Control group 1: this group was treated as follows:

1. Ultrasound treatment – 1MHz/intensity 0.65 W/cm^2
   for 5 to 10 mins, 5 times per week

2. Cryotherapy was carried out locally for up to 2 mins with the Kryojet device

3. Electro-stimulation – according to the customary standards –
   CP modulation (direct current) 5 mins and LP modulation (low frequency) 5 mins

4. The sportsmen also carried out individual cryotherapy at home according to the physiotherapist's directions

5. Antirheumatic agents (voltaren gel) were also used locally.

Experimental group 2: with this group, *BICOM* resonance therapy, type 4.0 device, was carried out as follows:

1. An introductory *basic progarm*
   The basic program was selected in accordance with the conductivity tested

2. *Sports injuries* as follow-up program
   Therapy type H + Di/bandpass setting 114kHz/amplification H 2.5 fold – Di 26 fold wobbling bandpass – interval operation – therapy time 5 mins

The amplifications for H and Di were tailored to the individual patient by testing beforehand. The preset 5-minute therapy time was increased to 10 minutes for all patients and then adjusted more precisely. The parameters were not retested for each subsequent therapy session but those tested at the start were used.

Results

The following tables indicate the relative success of the treatments used:

	Average VAS score prior to treatment	Average VAS score after treatment
Control group 1	5.25 (min 3/max 8)	2.6 (min 0/max 6)
BICOM group 2	5.41 (min 3/max 8)	0.61 (min 0/max 3)

Tab. 1: Average pain rating

	Total treatment period in days	Number of treatment sessions
Control group 1	144	120
BICOM group 2	104	48

Tab. 2: Total treatment period and number of treatment sessions

There is a statistically significant difference between the groups of $p<0.05$. All the parameters measured favour *BICOM* resonance therapy.

Discussion

The results are surprising and favour *BICOM* resonance therapy. Better results were achieved in less time and with fewer sessions than using standard methods. As a result, it was not necessary to interrupt training for so long.

Within 12 months of their initial injury, 4 of the sportsmen in the *BICOM* group appeared for further treatment due to a recurrence. This time their condition was relieved after just two *BICOM* sessions.

The test group only included active top sportsmen who sustain injuries in the form of overstrain syndrome relatively frequently and who had repeatedly undergone several courses of physiotherapy prior to *BICOM* therapy. Despite this, their subjective assessment of *BICOM* therapy was positive.

Summary

In conclusion, we can confirm that *BICOM* resonance therapy can be used successfully on overstrain syndrome without any difficulty or negative side-effects.