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Hamstrings thermal skin adaptations after 10 minutes treatment with INDIBA® activ radiofrequency treatment at 448 kHz and INDIBA® fascia treatment

Konstantinos Fousekis, Konstantinos Mylonas and Pavlos Angelopoulos
Technological Educational Institute of Western Greece, Greece

Background: Radiofrequency treatment is an innovative therapeutic approach utilized in the treatment of most musculoskeletal and sports injuries. The most evidence based radiofrequency treatment is the INDIBA® activ treatment at 448 kHz. INDIBA® activ treatment can be applied through electrodes that either passes radio frequency to the human body or through innovative fascial tools INDIBA® tools and combined soft tissue therapy INDIBA® Fascia. This study aimed to examine the hamstrings thermal skin responses to 448 kilohertz radio frequency based therapy applied either in the form of standard application INDIBA® activ or the form of combined soft tissue treatment INDIBA® Fascia treatment immediately after and 10' post-treatment.

Methods: 15 college students (age: 20.2±2.5 years, weight: 78.0±10.7 Kg, body fat: 14.3± 3.0%) participated in the present study. Participants received in a random and counter balanced order of a) standard INDIBA® activ application b) INDIBA® Fascia application c) INDIBA® activ Placebo and d) INDIBA® Fascia placebo treatment, on four visits made one per week. Participants in the first two groups received a single, 10 minute hyper thermic treatment of their hamstrings while placebo groups received same treatment applications but with no radiofrequency passing through the electrodes. Hamstrings skin temperature was measured in five points by a skin thermometer before, immediately and 10 minutes post treatment.

Results: Statistically significant differences ($p<0.05$) in skin temperature were found for the groups receiving INDIBA® active and INDIBA® Fascia treatment compared with those that received placebo treatment (figure 1) both in the temperature increase (after 10 minutes of application) and in maintaining it after 10 minutes. INDIBA® Fascia application resulted in a significantly ($p<0.05$) higher rise in the hamstrings skin temperature immediately after the hyper thermal treatment at 448 kHz. Nevertheless, skin temperature retention rate at 10 minutes follow-up was not significantly different between the two main applications of INDIBA® active treatment.

Conclusions: The findings of the present study confirm that INDIBA® activ radiofrequency treatment at 448 kilohertz can induce and sustain significant thermal skin adaptations. These skin temperature adaptations are of critical importance in neuro musculoskeletal rehabilitation as rises in skin temperature have been associated with underlying increased blood and lymph circulation and metabolism.

konfousekis@gmail.com