

## COHERENCE SCORES AND COHERENCE LEVEL: MODIFICATION EFFECTS OF HYDRO-AROMATHERAPY AND MINDFULNESS MEDITATION ON PATIENTS SUFFERING FROM INFLAMMATORY RHEUMATIC DISEASES

Vjeroslava Slavić<sup>1</sup>, Ivan Lakićević<sup>2</sup>, Jadranka Glišić<sup>1</sup>, Danijela Randjelović<sup>1</sup>, Gordana Rajović<sup>1</sup>

<sup>1</sup>Institute "Dr Simo Milošević" Igalo, Igalo, Montenegro

<sup>2</sup>Black Dog Institute Randwick, Randwick, Australia

Contact: Vjeroslava Slavić  
5 Sava Ilića Str., 85347 Igalo, Montenegro  
E-mail: drvjeroslavaslavic@gmail.com

Heart rate variability (HRV) and coherence score (CS) or coherent heart rhythm pattern are a validated method to establish autonomic nervous system (ANS) activity.

The aim of this research was to assess the modifications of CSs in a sample of patients suffering from inflammatory rheumatic diseases during their physical treatment and rehabilitation based on natural factors as well as hydro-aromatherapy and meditation.

This study included 44 Norwegian patients with confirmed diagnosis of inflammatory rheumatic diseases during four weeks of physical treatment and rehabilitation at the Institute "Dr Simo Milošević" Igalo, Montenegro. They were divided into two groups: (1) experimental (n = 22) and (2) control (n = 22). All the patients received the standard protocol based on natural healing mud and mineral water. However, the patients in the experimental group had additional hydro-aromatherapy (mineral water enriched with essential oils of lavender, orange and lemon) and meditation. The emWave Pro machine measured CS before and after the treatment. There were three coherence levels (CL): low, medium and high. Low reflected the amount of time in which there was no wavelike activity, medium some wavelike activity, and high a considerable amount of wavelike activity in the HRV tracing.

After the treatment, the CS was found to be significantly higher in the experimental group than in the control group ( $p < 0.015$ ). Simultaneously, the high CL was significantly higher in the experimental group ( $p < 0.026$ ), and the low CL was significantly lower in the control group ( $p < 0.017$ ). Comparison of the obtained CLs between the experimental and control groups after treatment showed that only the medium CL was statistically different ( $p < 0.009$ ).

Standard protocol at the Institute Igalo with the addition of hydro-aromatherapy and meditation significantly improved the ANS activity of patients suffering from inflammatory rheumatic diseases.

*Acta Medica Medianae 2021;60(4):09-15.*

**Key words:** coherence score, coherence levels, inflammatory rheumatic diseases