

The effect of balneotherapy on sleep, clinical symptoms, serum ghrelin and leptin levels in fibromyalgia: A randomized controlled single blind study

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Objectives: The aim of the study was to observe the effect of balneotherapy on sleep and clinical symptoms in patients with fibromyalgia and to investigate whether this effect is related to changes of serum ghrelin and leptin levels.

Material and Method: Seventy female patients with fibromyalgia, diagnosed according to ACR 2010 criteria were enrolled in the study. Patients were randomly assigned to two groups. Seven patients from control group and eight patients from treatment group dropped out from the study with different reasons. The patients in the treatment group had thermal water bath at 38°C for 20 minutes a day, and mud-pack treatment afterwards on back region at 45°C five days in a week, for two weeks. Control group did not receive any treatment. Visual Analogue Scale, patient's global assessments, physician's global assessments (VAS), tender point count (TPC), Fibromyalgia Impact Questionnaire (FIQ), Health Assessment Questionnaire (HAQ), Beck Depression Inventory (BDI), Insomnia Severity Index (ISI), leptin and ghrelin were outcome measures of the study. Patients were assessed at the beginning of the study, twelfth day and at the end of the first month.

Results: Improvements in outcome measures such as pain (VAS), physician's global assessments (VAS), FIQ, HAQ, BDI, and ISI was observed in treatment group at the end of the treatment. In between-group comparisons, treatment group was found to be superior for improvement TPC, HAQ, ISI and FIQ scores at the end of the treatment. Leptin levels elevated statistically significant in the treatment group.

Conclusion: Findings suggests that balneotherapy improves sleep and clinical symptoms in fibromyalgia and this effect may related to elevated leptin levels.