

# Effects of local mud pack and saline bath therapy in hand osteoarthritis; randomized single-blind study

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Hand osteoarthritis is a degenerative disease of hyaline cartilage which harms the hand joints. It affects the entire structure of the joints and causes a significant disability. In its etiology, gender, genetics, obesity and trauma play a crucial role. The prevalence increases with age, and although no difference is observed in its occurrence between men and pre-menopausal women, it is frequently seen in post-menopausal women.

As it was claimed in the "EULAR evidence based recommendations for the management of hand osteoarthritis Report of a Task Force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics" and "ACR Recommendations for the Use of Nonpharmacologic and Pharmacologic Therapies in Osteoarthritis of the Hand, Hip, and Knee"; local thermal therapies are among the treatment options of hand osteoarthritis.

In our trial we aim to prove how local peloidotherapy and immersion of hands into thermomineral water are beneficial on patient's pain and functioning, and to investigate which method is more effective. We have compared the "immersion of hands into thermomineral water" and the "local peloidotherapy" methods. 70 patients who have been observed at Istanbul University, Istanbul Medical Faculty, Medical Ecology and Hydroclimatology Department and diagnosed with hand osteoarthritis according to the ACR criteria were included to our trial. The participants have been divided into two groups by computer-based randomization. The method of "immersion of hands into the 38°C thermomineral water has been applied to one group and the method of local application of 42°C peloid has been applied to the other group. The treatment has been applied in cures to the patients in both groups for 2 weeks in total, 20 minutes every day for ten days.

Patients have been examined by a blind doctor four times: before the treatment, after the treatment, three and six months after the beginning of the treatment. They were examined by Visual Analog Scale (VAS) (pain, patient's overall assessment, physicians global assessment), Australian/Canadian (AUSCAN) Index (pain, stiff-

ness, and function), Health Assessment Questionnaire (HAQ), Duruöz Hand Index (DHI), Grip strength by Jamar hand dynamometer.

When the results have been analyzed it has been observed that both treatment groups have reached statistically significant results for improvements of pain and function which show parallelism. These improvements have also been observed in their 3rd and 6th month follow-up controls.

In this trial, it has been demonstrated that two different balneological methods – immersion of hands into thermomineral water and local peloidotherapy of hands – have similar positive effects on pain and function and that these effects continue for a long time.