

TERAPEUTICAL BENEFIT OF HIGH-INTENSITY LASER IN PATIENTS WITH KNEE OSTEOARTHRITIS - A RANDOMIZED COMPARATIVE SINGLE-BLIND STUDY

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Background and Aims

Knee osteoarthritis is a musculoskeletal disease characterized by degeneration and deterioration of articular cartilage. In addition to pharmacological therapy, physical modalities including low-intensity laser therapy (LILT) and high-intensity laser therapy (HILT), and kinesitherapy are used to treat knee osteoarthritis (KOA). To date, no research has been conducted in the Republic of North Macedonia that could be compared to existing research about the effects of HILT and LILT on functional ability in patients with KOA. The aim of this study was to compare the treatment effects of HILT and LILT in patients with KOA.

Methods

This was a randomized comparative single-blind study involving 72 patients divided into two groups. The first group was treated with 10 sessions of HILT, and the second group with 10 sessions of LILT. Patients of both groups performed exercises for 1 month. Functional outcome was evaluated after the end of the laser therapy and after 1 month using the Western Ontario and McMaster Universities Osteoarthritic Index (WOMAC). Statistical significance was defined as $p < 0.05$.

Results

At the end of the laser therapy and 1 month later, a statistically significant difference was found between the two groups, measured by the WOMAC index ($p < 0.001$). Additionally, the WOMAC index was compared within the groups.

Conclusion

Patients with KOA who were treated with HILT had significantly better functional recovery than patients treated with LILT.

Keywords: high-intensity, laser, low-intensity, laser, knee