Comparing the Immediate and Long-term Effects of Low and High Power Laser on the symptoms of Knee Osteoarthritis

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Abstract

Background and purpose: Osteoarthritis is the most common type of arthritis. It is the main cause of chronic musculoskeletal pain and disability in elderly population. The aim of this research was to compare the effects of low-level laser therapy (LLLT) and high-intensity laser therapy (HILT) on pain relief and reducing disability in patients with knee osteoarthritis.

Materials and methods: A total of 45 female patients participated in this randomized controlled study. The patients were randomly divided into three groups of low level laser, high power laser, and placebo laser. All patients, received standard treatment. Pain at rest and knee function were assessed by visual analog scale (VAS) and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), respectively before, immediately, and six weeks after the intervention.

Results: Low-power laser and high-power laser had immediate and long-lasting effect on reducing pain and disability (p<0.001). The immediate and lasting effect of these two interventions between the two groups were not significantly different (p>0.05).

Conclusion: High power laser was found to have similar effects to low power laser. LLLT is believed to be more appropriate since it is more economical for both therapist and patient.

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Keywords: knee osteoarthritis, low level laser therapy, high-intensity laser therapy, physiotherapy


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