

Efficacy of Low-level Laser Versus High-intensity Laser Therapy in the Management of Adhesive Capsulitis: A Randomized Clinical Trial

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Published in: *Saudi Journal of Medicine & Medical Sciences*, 2023
doi.org/10.4103/sjmms.sjmms_626_22

Previous studies have demonstrated that both low-level laser therapy (LLLT) and high-intensity laser therapy (HILT) are effective at reducing pain and improving function in patients with adhesive capsulitis (AC). This study was conducted to compare LLLT and HILT to determine which laser modality is the most effective treatment option for AC.

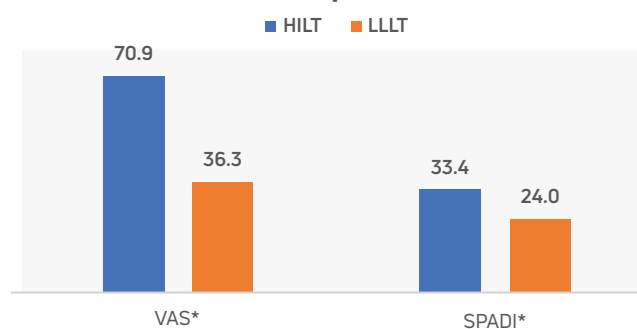
Forty patients with a diagnosis of AC were randomized to either HILT or LLLT. Both groups had laser treatment sessions 3 times per week for 3 weeks. Both groups also received 25 minutes of exercise therapy 5 times per week for 3 weeks.

- Patients in the **LLLT group** received treatment with a low-level laser with an output power of 240 mW. At each session, 9 points around the glenohumeral joint were treated for 50 seconds each at 3 J/cm² for a total treatment time of 7.5 minutes.
- Patients in the **HILT group**, for the first 3 sessions, were treated along the glenohumeral joint with pulsed wave therapy for 75 seconds, 8 W, 10 J/cm². The following 6 sessions used continuous wave therapy for 30 seconds, 12 W, 120 J/cm².

The primary outcome of the study was pain reduction measured by the Visual Analog Scale (VAS). A secondary outcome of the study was assessing pain and functional limitations using the Shoulder Pain and Disability Index (SPADI). After 3 weeks of laser and exercise treatment, both groups had significant improvement in the 2 outcome measures, but the HILT group had significantly better results than the LLLT group.

The study concluded that HILT is the more effective treatment option when compared to LLLT to reduce pain and improve disability in AC.

Percent Improvement



*statistically significant differences between the groups

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MKT00-13234 Rev A

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