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Effect of High Intensity Laser on Pain, Joint Range of Motion, and Functional Ability of Patients with Post-operative Rotator Cuff Tears: A Study Protocol

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ABSTRACT

Introduction: Rotator cuff tear is a common shoulder injury, often requiring surgical intervention to restore function and alleviate pain. Post-operative rehabilitation is critical for recovery, and various modalities are utilised to enhance healing. High-Intensity LASER Therapy (HILT) is an advanced treatment modality that uses LASER to promote tissue repair and reduce pain.

Need of the Study: This research explores the effects of HILT on pain, joint Range of Motion (ROM), and functional ability in patients recovering from rotator cuff repair.

Aim: To find out the effect of high intensity LASER on pain, joint ROM, and functional ability of patients with post-operative rotator cuff tear.

Materials and Methods: The present study will be a single blind, parallel group, randomised control trial recruiting 90 patients having severe partial thickness (>50%) and full thickness tear, undergone post operative rotator cuff repair and will be allocated through computerised randomisation into two groups as per the inclusion and exclusion criteria. The experimental group will be treated with HILT (Power 750 Joules, frequency 10 Hz, pulses width 50 ms, 5 minutes) along with conventional therapy (3 sets of 10 repetitions of wand exercises for shoulder ROM and shoulder isometrics for muscle strength followed by cold therapy for pain relief) whereas the control group will be treated with placebo HILT along with conventional therapy. The outcome measures; pain, joint ROM, and functional ability will be assessed using Numeric Pain Rating Scale, Goniometer, and Shoulder Pain And Disability Index (SPADI) score, respectively, at baseline and the fourth week of post intervention.

Keywords: Post-operative rehabilitation, Rotator cuff repair, Tissue repair

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