

# Efektivitas Kombinasi Laser Dan Elastic Taping Terhadap Skor Nyeri Dan Kecepatan Berjalan Pasien Osteoarthritis Lutut Dengan Cedera Medial Collateral Ligament Non Traumatik = Effectiveness Combination Of Laser And Elastic Taping On Pain Score And Walking Speed In Knee Osteoarthritis Patients With Non-Traumatic Medial Collateral Ligament Sprain

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## Abstrak

Cedera MCL menjadi sumber nyeri yang sering dijumpai pada OA lutut kompartemen medial. Penelitian ini bertujuan untuk melihat pengaruh terapi kombinasi laser-elastic taping terhadap skor nyeri dan kecepatan berjalan pasien OA lutut dengan cedera MCL non traumatis. Studi double blind, randomized controlled trial ini dilakukan dua kali seminggu selama empat minggu. Skor nyeri diukur dengan VAS dan kecepatan berjalan diukur dengan lintasan 15 meter. Pengukuran outcome dilakukan sebelum penelitian, minggu pertama, kedua, ketiga dan keempat. Total 30 subjek dibagi menjadi dua kelompok, 15 kelompok perlakuan dan 15 kelompok kontrol. Kelompok perlakuan mendapat terapi LLLT dan elastic taping tarikan 75% sedangkan kelompok kontrol mendapat terapi LLLT dan sham taping tanpa tarikan. Kedua kelompok diberikan logbook latihan penguatan di rumah. Hasil penelitian terdapat perbedaan bermakna secara statistik skor VAS antar kelompok ( $p=0,015$ ) pada minggu keempat. Tidak ditemukan perbedaan bermakna kecepatan berjalan antar kelompok ( $p=0,395$ ). Skor VAS dan kecepatan berjalan pada masing-masing kelompok mengalami perbaikan dan secara statistik bermakna. Kombinasi LLLT-elastic taping dengan atau tanpa tarikan dapat mengurangi nyeri dan memperbaiki kecepatan berjalan pasien OA lutut dengan cedera MCL non traumatis. Kelompok LLLT-elastic taping lebih unggul mengurangi nyeri dibandingkan LLLT-sham taping setelah empat minggu.

.....Injury to periarticular structures, namely Medial Collateral Ligament (MCL) sprain is a common cause of pain in medial compartment knee osteoarthritis (OA). This study aims to see the effect of combined LLLT laser therapy and elastic taping in the MCL area on improvement of pain scores and gait speed. This study is a double-blind, randomized controlled trial in patients with knee OA with non-traumatic MCL sprain confirmed by knee ultrasonography. The study was conducted twice a week for four weeks. The pain score was measured with a VAS score and gait speed was measured on a 15-meter track. Outcome measurements were carried out before the study (baseline), during the first, second, third, and fourth weeks. A total of 30 subjects were divided into two groups, 15 in the treatment group (group A) and 15 in the control group (group B). Group A was given LLLT therapy and elastic taping with 75% tension, while group B was given LLLT and sham taping without tension. Both groups were given a logbook for home program strengthening exercises. The results showed that there was a statistically significant difference in the VAS score between group A and group B ( $p = 0.015$ ) in the fourth week. There was no significant difference in walking speed between groups ( $p = 0.395$ ). The VAS score and walking speed in each group improved and were statistically significant. The combination of LLLT and elastic taping with or without tension can reduce pain and improve walking speed in knee OA patients with non-traumatic MCL sprain. After four weeks, the LLLT and elastic taping group were superior in reducing pain compared to the LLLT

and sham taping group.