

# Effect of Kinesio®tape application on pain and functional level in patients with Lateral Epicondylitis

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## Background

Taping provides immediate sensorimotor feedback and patients often report symptom relief, improved comfort level or stability of the involved joint. The elasticity of KT conforms to the body allowing for movement. Kinesiotaping has been used for reducing pain related to musculoskeletal injuries and it has also been thought that Kinesiotaping could improve sports performance based on muscular function. The results of this clinical trial are novel as no other studies comparing kinesiotaping application plus conventional physiotherapy plus exercises to a treatment regimen consisting of only conventional physiotherapy plus exercises will be identified.

## Objectives

The purpose of this randomized clinical trial was to investigate the effects of kinesio®taping (KT) applied on pain, grasping strength, pinch strength and functional level in patients with lateral epicondylitis.

## Methods

37 subjects, aged between 25 to 57 years presenting with lateral epicondylitis with symptom duration greater than 6 weeks, were randomized into two groups, were included in this study. Group 1 (n=24) took conventional physiotherapy including coldpack-TENS-transverse deep friction plus KT for elbow plus exercise and Group 2 (n=13) took only conventional physiotherapy and exercise. Both groups received treatment 2 times per week for 3 weeks. Outcomes of interest included pain via Visual Analog Scale (VAS) (at night- rest- activity), strength by Pinchmeter, Hand Dynamometer (JAMAR) and Isokinetic Test of elbow flexion-extension at speed of 60°/s and 120°/s and functional status measured with DASH questionnaire before and after treatment. Statistical analysis included Wilcoxon Signed Ranks Test for comparison between before and after treatment in both groups and Mann-Whitney U for comparison between Group 1 and 2.

## References

- 1-K.Nasata, 'the effect of Kinesio Taping on Muscular Micro-Damage Following Eccentric Exercises' 15th Annual Kinesio Taping International Symposium Review, pp 70-73,1999.
- 2-Kaya E,Zinnuroglu M,Tugcu I, 'Kinesio Taping Compared to Physical Therapy Modalities for the Treatment of Shoulder Impingement Syndrome' Clin. Rheumatol.Apr 30(Epub ahead of print),2010.
- 3-Nagrale A,Herd C,Ganuir S, 'Cyriax Physiotherapy Versus Phonophoresis with Supervised Exercise in Subjects with Lateral Epicondylalgia:A Randomized clinical Trial',J.Man Ther. 2009 17(3) 171-178.

## Results

Outcome measure scores were found to be similar between groups at baseline and after treatment. There was a decline in pain and an increase in function in both groups compared with baseline ( $p < 0,001$ ). The KT plus PT plus exercise group experienced greater outcomes for all variables in comparison to those receiving PT plus exercise, but there were no significant statistical differences in the reducing of pain improvement of function and strength isokinetic test between groups after treatment ( $p > 0,005$ ).

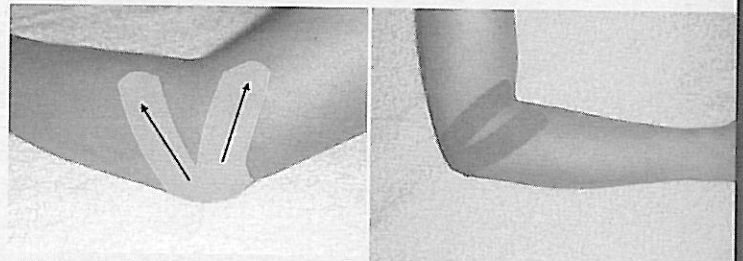


Figure 1. Kinesiotaping fascia method for elbow

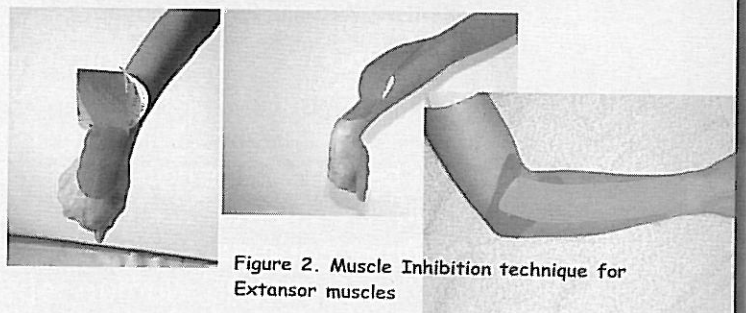


Figure 2. Muscle Inhibition technique for Extensor muscles

## Conclusion

- We have some limitations including the absence of a true nontreatment control group makes it difficult to differentiate between treatment effect and the natural course of the disorder.
- Each group received multiple interventions therefore, it is not possible to discern which component of the treatment had greatest impact on outcome.
- Finally, no long term follow up data was collected past 3 weeks; therefore the long time effects of the interventions in the present study remain unknown.