



AN ACUTE EFFECT OF KINESIO- TAPING ON PAIN AND STABILITY IN LATERAL ANKLE SPRAIN

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ABSTRACT: -

Introduction

Injuries to the lateral ligaments of the ankle complex are among the most common injuries sustained by athletes. Lateral ankle sprains are believed to be sustained by men and women at nearly the same rates.

Recurrent episodes of ankle instability have also been connected to degenerative alterations in the ankle complex. Individuals receiving surgery for ankle ligament repair were more likely to have osteophytes, or loose bodies, than those with healthy ankles.

In recent history, ankle taping has been a key method of preventing ankle sprains in sports.

The therapeutic tape has been demonstrated beneficial in relieving pain, enhancing muscular function restoring functional movement patterns.

Aims and Objectives

To evaluate the effectiveness of Kinesio-taping on pain and stability in patients with lateral ankle sprain

Methodology

A total of 40 patients were selected as per inclusion and exclusion criteria with pain and foot & Ankle disability index scores. The purposive sampling technique (non-probability sampling) was used for the selection of samples. The study duration was 6 months. Pre- and post-application of Kinesio-taping patients were assessed according to VAS (Visual analog scale).

Result

Statistical analysis with a 95% confidence level of paired samples t-test shows significant improvement i.e., the null hypothesis is rejected and the alternate hypothesis is accepted. A significant decrease in pain and reduced disability was observed by the Kinesio taping technique in normal weight Lateral ankle Sprain patients.

Conclusion

It was statistically observed that there was a significant decrease in pain and reduced disability by the Kinesio taping technique in normal-weight lateral ankle sprain patients.

Keywords

Ankle sprain (AS)

Kinesio-taping (KT)

Visual analog scale (VAS)

Instability

INTRODUCTION

Injuries to the lateral ligaments of the ankle complex are among the most common injuries sustained by athletes.^[1] Lateral ankle sprains are believed to be sustained by men and women at nearly the same rates. The most common predisposition to suffering a lateral ankle sprain is the history of at least one previous ankle sprain.^[2,3] Repetitive sprains have also been linked to an increased risk of osteoarthritis and articular degeneration at the ankle.^[4]

Residual symptoms after lateral ankle sprain affects 55% to 72% of patients at 6 weeks to 18 months.^[5] The frequency of complications and breadth of longstanding symptoms after ankle sprain has led to the suggestion of a diagnosis of the “sprained ankle syndrome”^[6] and to the conclusion “that there is no such thing as a simple ankle sprain.”^[4] It has also been estimated that 55% of individuals suffering ankle sprains do not seek injury treatment from a healthcare professional.^[2,3] Thus, the severity of ankle sprains may often be underestimated by athletes, and current treatment strategies for lateral ankle sprains may not be effective in preventing recurrent injuries or residual symptoms.

Lateral ankle sprains are also referred to as inversion ankle sprains or occasionally as supination ankle sprains. Individuals who suffer numerous repetitive ankle sprains have been reported as having functional instability, chronic instability and residual instability.^[7]

In recent history, ankle taping has been the principal means of preventing ankle sprains in sports. Therapeutic taping has been proven effective in alleviating pain, improving muscle function restoring functional movement patterns.^[8]

Kinesio taping (kt) was first developed by Dr Kenzo Kase, an osteopath, and an acupuncture practitioner in 1973 in Japan. The basic idea of taping is that the tape will support a weakened body part by preventing movements that negatively affect and further damage the weakened area). In this study, we have attempted to establish the relationship between lateral ankle sprain and the immediate effects of Kinesio-taping. We have tried to ascertain the immediate effect of Kinesio-taping on pain and function in lateral ankle sprain.^[9]

METHODOLOGY

A total of 40 patients were selected as per inclusion and exclusion criteria with pain and foot & ankle disability index scores. The purposive sampling technique (non-probability sampling) was used for the selection of samples. The study duration was 6 months. Pre- and post-application of Kinesio-taping patients were assessed according to VAS (Visual analog scale) and foot and ankle disability index for obtaining data on pre- and post-relief/improvement status in the condition.

RESULTS

Statistical analysis with a 95% confidence level of paired samples t-test shows significant improvement i.e., the null hypothesis is rejected and the alternate hypothesis is accepted. A significant decrease in pain and reduced disability was observed by the Kinesio taping technique in normal weight Lateral ankle Sprain patients.

DISCUSSION

The present study's goal was to find an acute effect of the Kinesio taping technique in reducing pain, and increasing stability with functional status, in patients with Lateral ankle sprain. In previous studies, it was also hypothesized that the Kinesio-taping technique is effective in decreasing pain and increasing functional stability, in patients with Lateral ankle sprain.

The present study was done to determine the acute effect of the Kinesio taping technique to decrease pain and increase stability in normal-weight lateral ankle sprain patients. The pre and post-intervention were observed by foot and ankle disability index score and VAS scale. A total of 40 subjects were recruited for the study according to the inclusion and exclusion criteria. Those who fulfilled the criteria were allowed to participate in the study. all the subjects were taken from the physiotherapy OPD department.

The data collected from the study shows that the null hypothesis is rejected and the alternate hypothesis is accepted, which means the Kinesio taping technique helps decrease pain and increase stability in weight Lateral ankle sprain patients.

Past literature showed in the Myoung Kwon Kim (2017) et al in their study that ankle balance taping that uses kinesiology tape instantly increased the walking ability of amateur soccer players with a lateral ankle sprain. Therefore, ankle balance taping is a useful alternative to prevent and treat ankle sprain in soccer players.

Despite the unknown proprioceptive effects of Kinesio™ tape, it has been suggested as a possible proprioceptive facilitator in the acute phases of the injury process (Murray, 2001).

To fully understand the effect of Kinesio™ tape on proprioception, further research needs to be conducted on other joints, on the method of application of Kinesio™ tape, and on the health of the subject to whom it is applied. Further research may provide vital information about a possible benefit of Kinesio™ taping during the acute and sub-acute phases of rehabilitation, thus facilitating earlier return to activity participation.

This present study was conducted for a short period and with a small sample size; so long-term improvement in pain and increasing stability was not observed. There is also a lack of resources, so in future research involving a long period and a larger sample size is also possible with the help of ample resources. The result of this study will be very helpful for the physiotherapist to choose the Kinesio taping technique for decreasing pain and increasing stability in weight Lateral ankle sprain patients.

LIMITATIONS OF THE STUDY

The sample size was very small, so the result is difficult to generalize among the whole population as different people can have different lifestyles.

The Kinesio tape's instantaneous effects after 30 minutes of treatment were the basis for the outcome; however, earlier research indicated that treatment should be sustained for a maximum of 4–6 weeks to achieve the optimum results from the patient. However, given the socioeconomic composition of our nation, patients are not motivated to receive extended treatment, which is why the result is not significant enough.

Public holidays occasionally led to therapy and exercise sessions being disrupted, which could have affected the outcome.

While each subject followed the same regimen, their capacity for exercise tolerance varied. It would be preferable if participants received varying protocols based on their ability.

It was the postgraduate student's first research assignment. Therefore, in terms of the applied parts of research, the researcher's familiarity with procedures and strategies was limited. Given that this was the researcher's first survey, it's possible that some errors were made and missed by the respectable teacher and supervisor.

SCOPE FOR FUTURE RESEARCH

A similar study can be conducted with a larger sample size. The study can be conducted for a longer time duration. Further, gender-specific and sports-specific studies regarding the benefits of Kinesio-taping can be conducted.

CONCLUSION

The present study was conducted among 40 people to find the Effectiveness of the Kinesiology Taping Technique on Lateral ankle sprain. As per the result, hence we concluded that in the present study, the Null hypothesis is rejected and the alternate hypothesis is accepted. So, it has been concluded that the Kinesio taping technique helps decrease pain and increase stability in normal-weight lateral ankle sprain patients.

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