

# The Effects Of Kinesio Tape As A Method Of Reducing Swelling In The Case Of A Grade II Lateral Ankle Sprain

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## Abstract

**Background:** Athlete was a 17 year old volleyball player with a previous history of ankle sprains. Athlete is 170 cm in height, and 56 kg in weight. The pain, swelling and ecchymosis were reported as more extreme than her previous ankle injuries. Positive laxity was noted with Anterior drawer, Talar tilt, and Kleigers special orthopedic tests. Despite therapeutic interventions, swelling progressed into her ankle and toes. The athlete was withheld from athletic activity until full multidirectional AROM and strength were restored. AROM and strength were compared bilaterally using MMT. **Differential Diagnosis:** Lateral ankle sprain, ATFL tear, Fibula fracture. **Treatment:** Treatment included RICE, electrical stimulation, pulsed ultrasound, and lymphatic massage. Kinesiotape was applied after noting the presence of pitting edema and swelling. The tape was interweaved and compressed in an attempt to remove swelling. Increased temperature and continued pitting edema behind the fibula led to referral to rule out a possible fracture. **Uniqueness:** Acute ankle sprains are the most common injuries seen in sports. The mechanism of injury was not irregular. However, the discoloration and swelling made this injury unique, as well as the failed attempts of traditional methods to reduce symptoms. The use of kinesiotape proved to be effective in reducing swelling and ecchymosis. **Conclusion:** This case highlighted the methods used to treat a grade II lateral ankle sprain. The symptoms that the athlete presented led the treatment step by step through the process. This case introduces potential benefits of kinesiotape in regards to reducing swelling and ecchymosis during rehabilitation.

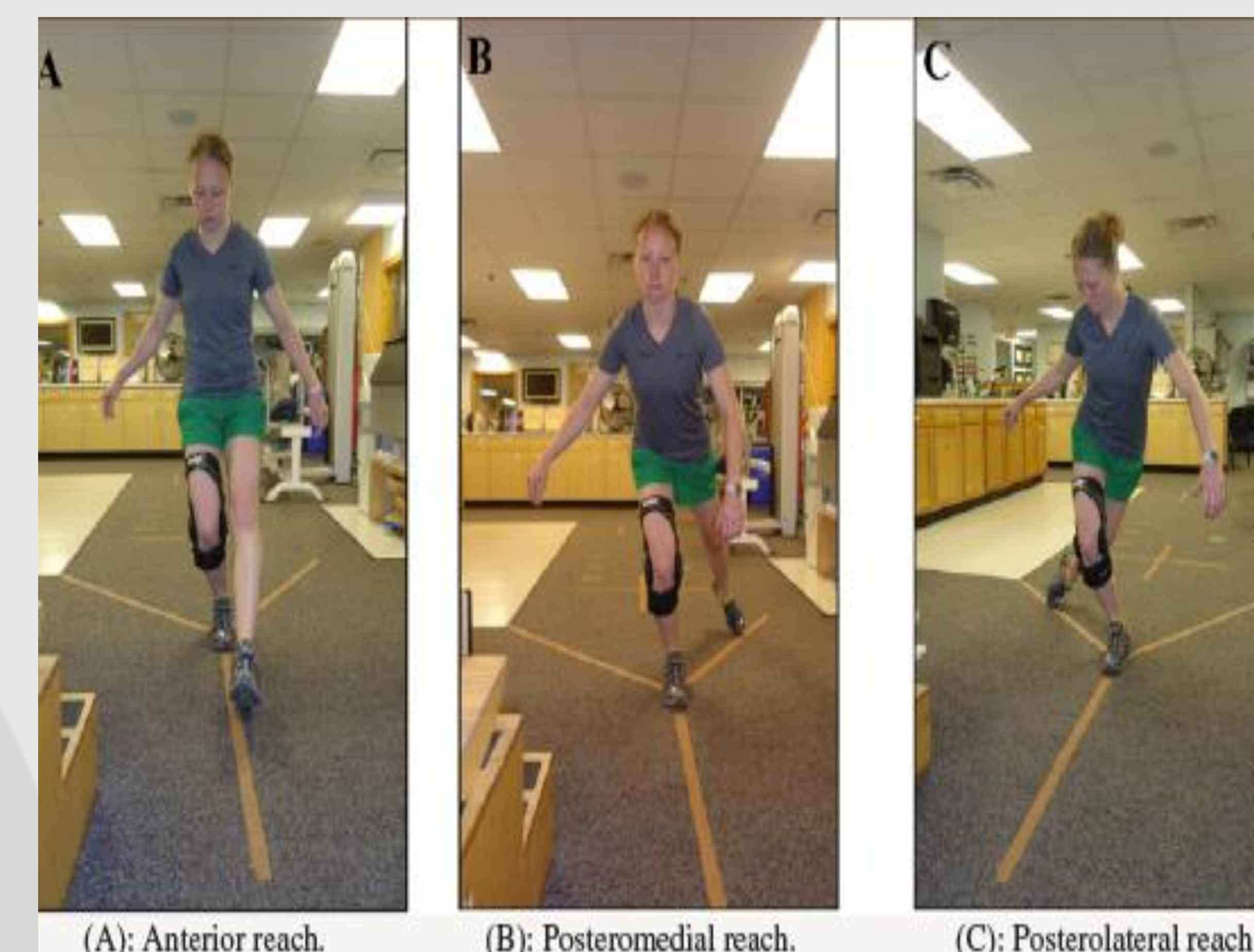
## Treatment Methods

Walking boot and crutches  
 Cryotherapy: Ice pack and cold compression unit  
 Electrical Stimulation: IFC setting w/ quadpolar arrangement  
 Pulsed Ultrasound  
 Therapeutic massage  
 Compression techniques: ACE wrap, ankle tape, interwoven kinesiology tape  
 Ankle exercises: ROM, Strengthening, Proprioception, and Functional Return to Play Exercises

Grade I	Grade I sprains stretch the ligaments causing mild swelling and pain with stress testing but no laxity.
Grade II	Grade II sprains partially tear the ligaments resulting in more moderate swelling and pain along with some laxity on stress testing. Despite the increased laxity, grade II sprains have a definitive endpoint with stress testing.
Grade III	Grade III sprains are complete tears of the ligaments with a tremendous amount of pain, swelling, and gross laxity on stress testing without any definitive endpoint.

## Implications

The implications of this case study suggested that kinesiology tape and massage maybe a successful treatment option if not more, at reducing the symptoms of swelling and edema than other alternative conservative treatment methods.



## Discussion and Summary

This case introduced the potential benefits of kinesiology tape in regards to the reduction of swelling and edema during the rehabilitative process. The traditional methods of rehabilitation were also explored, however, they failed to fully treat the athlete and her injury. This case highlighted the potential benefits of kinesiology tape in the reduction of swelling and edema. As such, further studies should be conducted into the potential benefits of kinesiology tape application.

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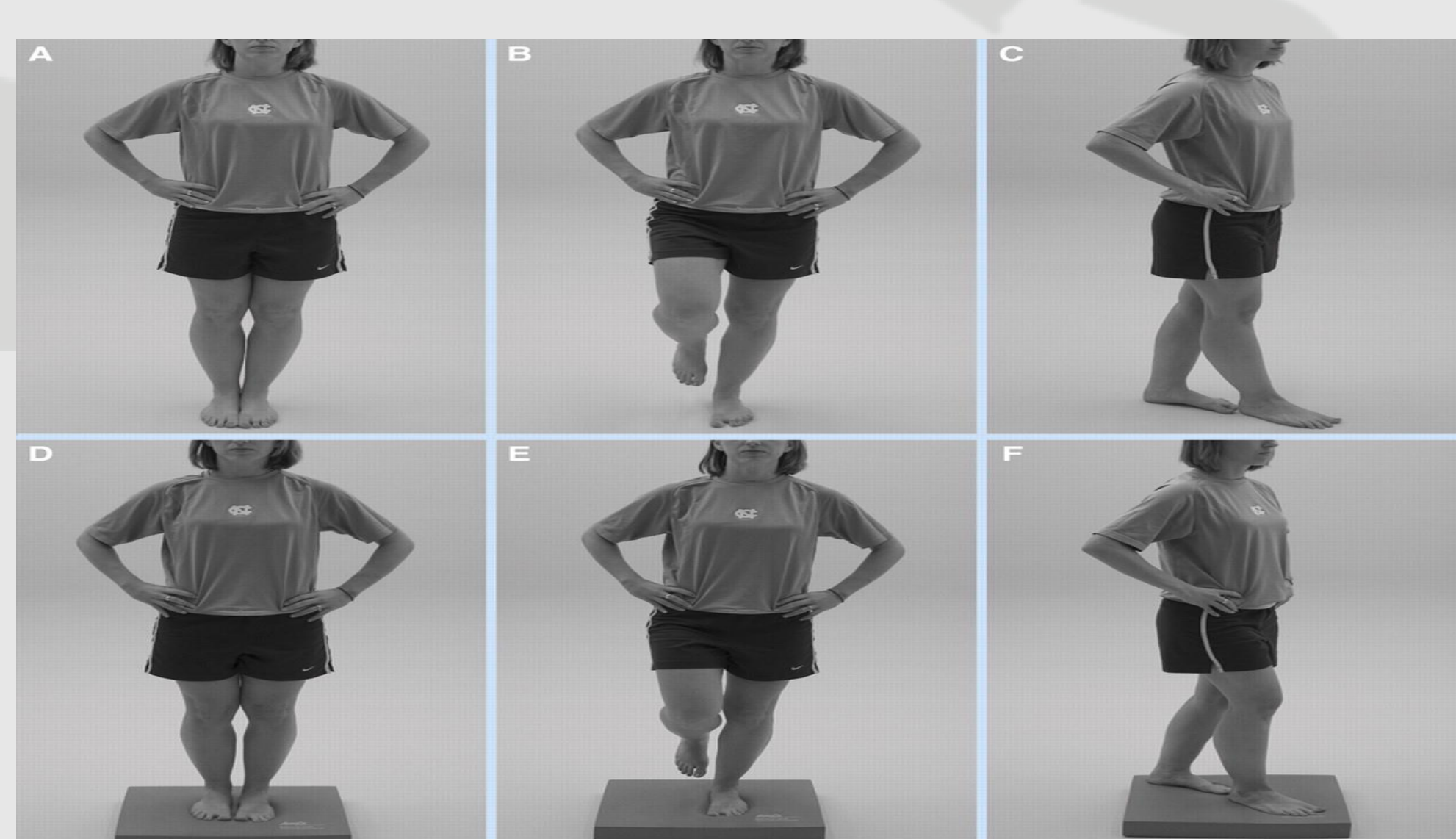
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## Introduction

Athlete was a 17 y/o volleyball player with a prior history of ankle sprains and instability. During pre-game warm-ups, she landed on another players foot and suffered a Grade II lateral ankle sprain. Athlete underwent conservative treatment, but was later referred tdue to lingering symptoms. After traditional therapeutic methods failed to reduce the symptoms of swelling and edema, other approaches were attempted. The application of kinesiology tape and massage demonsratted to be successful in decreasing these symptoms.

## Purpose

The rehabilitation of an athlete is a fundamental aspect of athletic training. The determination and application of the most effective treatment methods should be used to return the athlete to full participation following an injury.

## Results

Athlete has returned to full functional activity. The athlete had nearly full ROM & strength prior to the reduction of the swelling & heat phases of the inflammatory process. The traditional methods were not able to reduce these symptoms. After the application of Kinesio tape & massage, the swelling was reduced followed by reduced heat & edema.