

The effectiveness of kinesiotaping as a supplemental intervention in the management of lower extremity ecchymosis and subsequent contusion following a MVA: A Case Report.

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Background

Fall prevention is a major focal point for research surrounding the older population. However, the frequency of injuries resulting in hematoma or extensive ecchymosis in the absence of fracture in older adults is not well understood. Current research indicates incidence rates of patients with lower extremity injuries presenting to United States emergency departments per 100,000 of 98 for lower trunk contusions/abrasions, 62 for knee contusions/abrasions, and 50 for foot contusions/abrasions¹. With the limited availability of research on this topic, there is a void in the current literature regarding physical therapy protocols to aid in the proper care and management of hematoma and ecchymosis absorption following a traumatic injury.

Purpose

Kinesiotaping has become a popular treatment option for sport and musculoskeletal related injuries², however, the use of Kinesiotaping in the management of acute injury in older adults resulting in hematoma has only been minimally explored. The purpose of this case report is to outline the effectiveness of Kinesiotaping as a supplement to conservative therapy in the management of post traumatic hematoma.

Methods

The patient is a 71-year-old Caucasian female with prior medical history including cancer, hypertension, osteoarthritis, and bilateral cemented total hip replacements (THR). The patient stated that she was in her car on her way home from work when she stopped at her mailbox to retrieve her mail. She mistakenly put her car in reverse and as she stepped out of her vehicle, the car drove over the medial length of her right lower extremity (LE). Despite the severity of the accident, the patient suffered no fractures to her right LE, however, presented with extensive ecchymosis and hematoma. This patient was of interest for this case report because she suffered a minor injury as compared to what is usually expected, especially taking into consideration factors predisposing her for future fracture such as age and gender. The patient was treated with a total of twelve sessions, averaging 3 sessions per week for 4 weeks. Her treatments were broken up into two phases; Phase I consisted of therapeutic interventions with an emphasis on therapeutic exercise and manual therapy, and Phase II placed emphasis on further diminishing pain, reabsorption of ecchymosis, and decreasing all residual edema. Kinesiotaping was incorporated into the patient's plan of care in nine out of the twelve total treatments. Three 'fan' strips were applied to the anterolateral aspect of the left thigh and an additional 'band-aid' technique was used directly over the main hematoma site at the anteromedial groin.

Results

The patient demonstrated significant improvement in pain reduction, strength, and overall functional ability. Additionally, the patient's lower extremity appearance of ecchymosis, edema, and hematoma demonstrated marked improvement. The patient was also able to regain full participation in work and daily physical activity.

Discussion and Conclusion

The focus of this case report was to describe outcome of physical therapy following the use of Kinesiotape as supplement to traditional interventions in the management of a patient with traumatic hematoma. Over a 4-week period, this patient was able to achieve full prior level of function and had a full reduction of pain. The findings in this case report cannot demonstrate a cause and effect relationship between Kinesiotaping and hematoma absorption; rather, it gives anecdotal evidence attesting to the benefits of Kinesiotaping for hematoma absorption and provides a platform for future research on the topic.

Citations

1. Lambers K, Ootes D, Ring D. Incidence of patients with lower extremity injuries presenting to US emergency departments by anatomic region, disease category, and age. *Clin Orthop Relat Res.* 2012;470:284-290.
2. Kase K, Wallis J, Kase T. *Clinical Therapeutic Applications of the Kinesio Taping Method.* Tokyo, Japan: Ken Ikai Co Ltd; 2003.