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THE EFFECT OF TAPING VERSUS SEMI-RIGID BRACING ON PATIENT OUTCOME AND SATISFACTION IN ANKLE SPRAINS: A PROSPECTIVE, RANDOMIZED CONTROLLED TRIAL

Sacha Lardenoye S., Theunissen E., Cleffken B., Brink P., de Bie R., Poeze M.
Department of Surgery, Division of Traumasurgery, Maastricht University

Acute ankle injuries are the most common musculoskeletal injury. 50% of the injuries occur when doing sport and 75% are classified as supination traumas. The lateral collateral ligament complex of the ankle joint is affected in 85% of cases.

A lateral collateral ligament injury in the upper ankle is the most common sports injury, affecting around 1 in 10,000 people doing sport each day.

The functional treatment for these dislocation traumas is a generally widespread and recognized treatment. However, no study-based statement can currently be made as to which functional treatment option is the most effective. The aim of the study is to investigate the effectiveness of the treatment with ankle orthoses in comparison to a tape bandage in terms of patient outcomes and patient satisfaction.

METHODOLOGY

Study design:	prospective, randomized, controlled (two-arm)
Sample:	n= 100 total;
Indication:	Supination trauma after 5-7 days, Grades II and III
Test orthosis:	U-shaped (AirLoc, Bauerfeind AG), non-elastic tape bandage (Leukotape, Beiersdorf;)
Test method:	Wearing period of four weeks plus eight weeks of physical therapy, including proprioceptive training, initial collection of data on patient satisfaction and skin condition via patient questionnaire and numeric scales. The functional parameters have been collected using the Karlsson scoring scale and the range of motion determined.



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Orthosis for the stabilization of the upper ankle

Source:

Lardenoye, S., Theunissen, Ed., Cleffken, B., Brink, P., R., G., de Bie, R., A., Poeze, M.:

The effect of taping versus semi-rigid bracing on patient outcome and satisfaction in ankle sprains: a prospective, randomized controlled trial
BMC Musculoskeletal Disorders 2012, 13:8; <http://www.biomedcentral.com/1471-2474/13/81>

RESULTS

According to information provided by patients, the wearing comfort and treatment satisfaction are significantly better with AirLoc than with taping. In the taping group, 59% of patients experienced complications such as contact dermatitis, blisters, skin changes, and skin irritation. This figure was significantly lower in the orthosis group at 15% ($p < 0.0001$). The information on pain and the functional outcome was comparable in both groups.

Conclusion:

Using ankle orthoses in the treatment of supination traumas led to fewer complications and greater patient satisfaction than treatment with a tape bandage. This is consistent with other studies that also showed a comparable outcome in terms of functionality and pain perception.

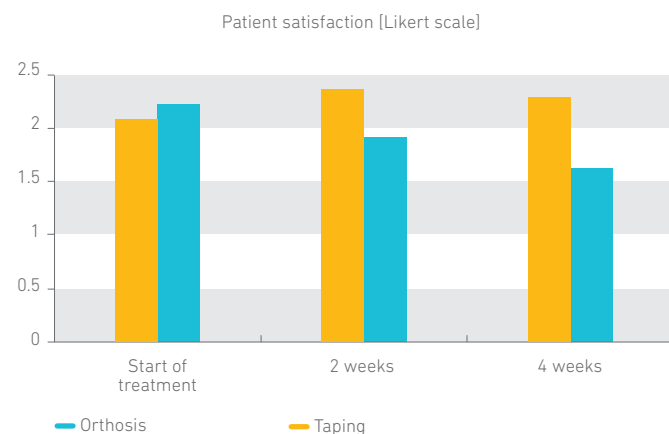


Fig. 1: Patient satisfaction during functional treatment for supination trauma. Representation of the average values on a Linkert scale (extremely satisfied = 0, dissatisfied = 5). The patients are significantly more satisfied with semi-rigid orthoses than patients treated with taping ($p < 0.0001$).

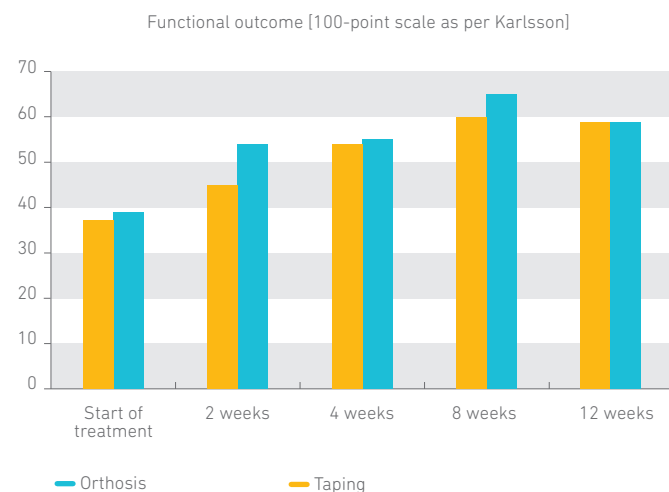


Fig. 2: Functional outcome as per Karlsson during treatment for supination trauma. Representation of the average values on a scale of 0 (no function) to 100 (optimal function).

44%

fewer complications with ankle treatment than with taping

with AirLoc®