

## Original Article

# EFFICACY OF WEIGHT BEARING DISTAL TIBIOFIBULAR JOINT MOBILIZATION WITH MOVEMENT (MWM) IN IMPROVING PAIN, DORSIFLEXION RANGE AND FUNCTION IN PATIENTS WITH POSTACUTE LATERAL ANKLE SPRAIN

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## ABSTRACT

**Background:** Various treatments in physiotherapy are available for ankle sprain with no consensus like taping, bracing, splinting, cryotherapy, electrotherapy modality like ultrasound, laser therapy, interferential therapy and HVGS, joint mobilization. Mulligan's mobilizations-with movement (MWM) have been proposed as novel manual therapy technique to improve joint ROM by combining physiological and accessory joint movements. He developed a suite of treatment techniques on the basis of his theory of positional faults and altered joint kinematics following injuries affecting spinal and peripheral joints.

**Objective:** To find out the efficacy of distal tibiofibular joint MWM in conjunction with conventional treatment over conventional treatment alone for improving pain, dorsiflexion range and lower extremity function in patients with post acute lateral ankle sprain.

**Subject and methods:** 30 lateral ankle sprain subjects were randomized into 2 groups:- Group 1(n=15) were received distal tibiofibular joint MWM along with conventional treatment and Group 2 (n=15) subjects were received conventional treatment only. Treatment consist of 3 sessions spread over 1 week, each session 48 hours apart and data is recorded at beginning and end of treatment regimen.

**Results:** Independent t-test showed statistical significant improvement in only weight bearing lunge measure for dorsiflexion (p=0.008) in group 1 over group 2 and paired t-test was used for within group analysis which showed significant improvement in both the groups in all the outcome variables (p=0.000)

**Discussion and conclusion:** Both the groups demonstrated significant improvement in pain, range and lower extremity function in lateral ankle sprain and distal tibiofibular joint mobilization with movement in conjunction with conventional treatment will be significantly more effective than conventional treatment alone in improving weight bearing ankle dorsiflexion range (Weight bearing lunge measure) in post acute lateral ankle sprain. So distal tibiofibular joint mobilization with movement is worth considering for further exploration in lateral ankle sprain patients.

**KEYWORDS:** Lateral ankle sprain, Distal tibiofibular joint MWM, Weight bearing lunge measure of dorsiflexion.

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## INTRODUCTION

The lateral ligament complex of the ankle, described as the body's "most frequently injured structure" (Garrick, 1977), is mechanically vulnerable to sprain injury. At extremes of plantar-

flexion and inversion, influenced by the shorter medial aspect of the ankle mortise, the relatively weak anterior talofibular ligament (ATFL) and calcaneofibular ligament (CFL) are prone to varying grades of rupture, often via minimal force. <sup>1</sup>