

Reduction of Ankle Equinus Contracture Secondary to Diabetes Mellitus with Dynamic Splinting

The Foot and Ankle Online Journal 3 (3): 2

Introduction: *Ankle equinus is a hereditary or acquired contracture of the triceps surae or shortening of the connective tissue causing inability of the foot to dorsiflex during gait. For the patient population with diabetes mellitus, this high plantar pressure from contracture often results in ulceration. This is frequently treated by Achilles tendon lengthening which helps to avoid infection and amputation. The purpose of this study is to examine the effect of dynamic splinting in reduction of ankle equinus contracture for patients with diabetes mellitus.*

Methods: *A retrospective analysis was accomplished by reviewing the history of 48 patients following treatment with an ankle dorsiflexion dynamic splint. This dynamic splinting modality delivers low-load prolonged duration stretching while one sleeps. In this home therapy study, dynamic splinting was used for a mean 240 hours in the first month (5 weeks).*

Results: *Patients showed a statistically significant change in maximal ankle dorsiflexion ($P < 0.0001$). The patients mean, maximal active range of motion in dorsiflexion increased by 9° in the first month.*

Conclusion: *This modality proved effective as home therapy and should be examined in further research so that it may be employed as standard of care in treating ankle equinus contracture.*

Key words: Bilateral tension, Dynasplint, Home therapy, Rehabilitation.

Accepted: February, 2010

Published: March, 2010

ISSN 1941-6806

doi: 10.3827/faoj.2010.0303.0002