



Proximal Medial Gastrocnemius Recession and Stretching Versus Stretching as a Treatment of Chronic Plantar Heel Pain

SCIENCE

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Key Take-Away:

Gastrocnemius recession surgery lengthens the calf muscle and takes the pressure off of this area. The results from this randomised clinical trial showed that the proximal medial gastrocnemius recession with a stretching program significantly improved ankle dorsiflexion, average forefoot plantar pressure and chronic plantar pain.

Introduction:

Plantar heel pain is a common condition causing substantial pain and disability. Gastrocnemius recession has been reported as a useful treatment option, but there is a lack of prospective clinical and biomechanical outcome data. This study aimed to examine the clinical and biomechanical outcomes of gastrocnemius recession and stretching as compared to a stretching exercise protocol for the patients with plantar heel pain which lasted for more than 12 months.

Methods:

Forty patients with plantar heel pain for more than one year were randomised to a home stretching exercise program only or to surgery consisting of a proximal medial gastrocnemius recession in addition to stretching exercises. The primary outcome was the American Orthopaedic Foot & Ankle Society (AOFAS) ankle-hindfoot score at 12 months. Secondary clinical outcomes were the visual analogue scale (VAS) and Short Form-36 (SF-36) pain scores. The biomechanical outcome parameters included ankle dorsiflexion, Achilles function examined by a test battery with six independent tests, and plantar pressure investigated by pedobarography. The data were obtained at baseline and follow-up of 12-months.

Results:

The AOFAS score surged from 59.5 (42-76) to 88.0 (50-100) and 52.5 (37-73) to 65.5 (31-88) for the operative group and nonoperative group. AOFAS, VAS pain, and SF-36 scores were significantly better in the operative as opposed to the nonoperative group at 12-month follow-up. Ankle dorsiflexion surged from 6 degrees (-3 to 15) to 10.5 degrees (0 to 23). There was no between-group difference observed for Achilles function at follow-up. The average forefoot plantar pressure for the operative group surged from 536 KPa (306-708) to 642 KPa (384-885) at follow-up.

Conclusion:

Proximal medial gastrocnemius recession with a stretching program was found to be a safe and efficient method for the treatment of chronic plantar heel pain.

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