



The Orthotic Effect of Functional Electrical Stimulation on the Improvement of Walking in Stroke Patients with a Dropped Foot: A Systematic Review

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Abstract:

Objective

Analysis of the available evidence on the improvement of walking in stroke patients with a dropped foot when using peroneus stimulation.

Methods

A systematic review was performed to identify trials that investigated the orthotic effect of functional electrical stimulation (FES) on walking in stroke patients with a dropped foot. Two independent raters scored the methodological quality of the included articles. Walking speed and physiological cost index (PCI) were selected as the primary outcome measures. Studies that measured walking speed were pooled and a pooled difference including confidence interval was calculated.

Results

Eight studies were included in the review, of which one was a randomized controlled trial. Methodological score ranged from 8 to 18 out of 19. Six studies measured walking speed. The pooled improvement in walking speed was 0.13 m/s (0.07–0.2) or 38% (22.18–53.8).

Conclusions

The present review suggests a positive orthotic effect of functional electrical stimulation on walking speed.

Key Words: Equinovarus—Peroneal nerve—Electrical stimulation—Hemiplegia—Gait.

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