Plantar Flexor Training Improves Walking in People with Cerebral Palsy

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Purpose: We examined our hypothesis that a 7-week program of plantar flexor training improves gait function, by using spatiotemporal and Center of pressure (COP) parameters.

Subject: Three subjects with cerebral palsy (13.7 ± 5.4 years old), who are possible to serial walk 10 m or more, and understand oral instructions, were included in the study.

Methods: We employed a single-subject ABA' design consisting of a 7-week baseline phase, a 7-week intervention phase, and a 7-week post intervention phase. The subjects were given training 3 times a week during the intervention phase.

Result: Two cases showed a significant improvement in the walking ability and the walking efficiency, one case showed a significant improvement in the walking efficiency. These results support our hypothesis.

Conclusion: It is not easy to improve gait function by increasing the amount of the activity of the muscle for people with cerebral palsy who have not have a normal movement pattern since their birth. However, the approach of the amount which has been a contraindication, is one of the important approaches for it to improve and maintain gait function.