Abstract

Background: Treadmill gait training as a therapeutic resource in the rehabilitation of children with cerebral palsy has recently been the focus of many studies; however, little is still known regarding its effect on static and functional balance in children. Objective: The aim of the present study was to compare the effects of treadmill training and over ground gait training in children with cerebral palsy. Method: A randomized controlled trial with blinded evaluator was conducted with children with cerebral palsy between three and 12 years of age categorized in Levels I to III of the Gross Motor Function Classification System. Assessments were performed before and after the intervention and involved the Berg balance scale as well as the determination of oscillations from the center of pressure in the anteroposterior and mediolateral directions with eyes open and closed. The experimental group was submitted to treadmill training and the control group performed gait training over the ground. The intervention consisted of two 30-minute sessions per week for seven weeks. Results: Both groups exhibited better functional balance after the protocol. The experimental group had higher Berg balance scale scores and exhibited lesser mediolateral oscillation with eyes open in comparison to the control group. Conclusions: Treadmill training had a greater effect on functional balance and mediolateral oscillation in comparison to over ground gait training in children with cerebral palsy. Trial registration: RBR-5v3kg9 (Brazilian Registry of Clinical Trials).

Keywords

Cerebral palsy, physical therapy, postural balance.