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The Effectiveness of Functional Strength Training in Improving Walking Ability in A Child with Cerebral Palsy: A Case Report

Soumya S.[1], Dr. S. Karthikeyan[2] and Dr. P. Senthil Selvam[3]

[1]Research Scholar, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai - 600117, Tamil Nadu, India
[2]Assistant Professor, School of Physiotherapy, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai - 600117, Tamil Nadu, India
[3]Head of Department, School of Physiotherapy, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai - 600117, Tamil Nadu, India

Abstract

Introduction: Cerebral Palsy is a condition caused by non-progressive lesion in the developing brain. The walking ability in children with Cerebral Palsy is worse than their peers without disability and may get even worse with the age advancement. Therefore, an effective intervention for children with cerebral palsy to preserve or to improve their motor functions is very important.

Objectives: Children with Cerebral Palsy typically walk slowly and have difficulty in performing activities like walking up and down steps and running. The objective of this study is to find out the effectiveness of functional strength training in improving walking ability in a child with Cerebral Palsy.

Methodology: A six year's old male child with spastic quadriplegic type of Cerebral Palsy classified as level V according to Gross Motor Function Classification System (GMFCS), participated in the study. Assessments were done at baseline and 12 week's post-intervention. Gross Motor Function Measure 88 (GMFM-88), Timed Up and Go Test (TUG) were assessed. A functional strength training protocol with resisted exercises and weight training is applied for 5 sessions in a week for 12 weeks is applied.

Result: The child responded well to the treatment. Post rehabilitation, he was able to maintain sitting balance, initiate reach outs and able to stand with support from sitting position. There was significant improvement in walking ability. The GMFM score increased especially in dimensions D and E, and also the TUG score decreased after the strength training.

Conclusion: The child showed improvement both clinically and with outcome measures. Therefore individualized functional strength training is an effective alternative in rehabilitation of children with CP.

Keywords: Cerebral Palsy; Functional Strength Training; Walking Ability