Effect of Myofascial Release as an Adjunct to Conventional Therapy on Quality of Upper Extremity Function in Children with Hemiplegic Cerebral Palsy: An Experimental Study

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ABSTRACT

Introduction: In children with Hemiplegic Cerebral Palsy impaired hand function is a major disability leading to developmental disuse of the involved extremity. Evidence suggests that structural changes within the spastic muscles and surrounding tissues results in muscle stiffness and restrictions in the myofascia, limiting ranges of movement of joints. It can also affect the posture and movement and strength because of decreased extensibility. Myofascial release has been widely used in the last decade as an adjunct to a variety of treatment modalities included in the rehabilitation of pediatric population. The objective of this study was to assess the additional effects of Myofascial Release (MFR) on gross motor and fine motor functions and on spasticity.

Methods: 20 patients with hemiplegic Cerebral Palsy (CP) who fulfilled the inclusion criteria were randomly allocated to either experimental group (n=10) or the conventional group (n=10). The experimental group received MFR along with Conventional treatment three times a week for 4 weeks. The conventional group received general exercise protocol for the same duration. The outcome measures were Quality of Upper Extremity Skills Test (QUEST) and Modified Tardieu Scale (MTS).

Results: A total of 20 subjects completed the 4 weeks study program. Post treatment, there was a significant decrease in the values of the MTS in both the groups. There was a significant increase in the scores of the QUEST scale within both the groups; as well as significant change between the two groups. The QUEST's Gross Motor and Fine motor Domains showed a significant improvement in the experimental group. There was a significant difference in the total QUEST score within the group's pre- treatment and post treatment.

Conclusion: The study showed that MFR has an additional effect on quality of upper extremity function.

Keywords: Cerebral palsy, MFR, Upper extremity function

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