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The effects of Modified Constraint Induced Movement Therapy on children with hemiplegic cerebral palsy; Family-based services

Masoud Gharib, Ali Hosseini, Nazilla Akbar Fahimi, Masoud Salehi
University of welfare & Rehabilitation Sciences, Tehran, Iran, Islamic Republic of

Introduction: Constraint Induced Movement therapy was introduced by Taub in 1999 findings on some researches showed that this method has been used by therapists and had effective results on function of upper extremity but there was no evidence to find out the effective period and diet of using this method. Therefore, in this study has been tried to find out the evidence for the mentioned points.

Objective: the aim of this study was to investigate the time effects of Modified Constraint Induced Movement (MCIM) therapy on grasp quality of upper extremity in children with hemiplegic cerebral palsy.

Method: Eleven children with hemiplegic cerebral palsy as an experimental group (4 males, 7 females), received MCIM therapy in a rehabilitation center, University of welfare and rehabilitation, Tehran, Iran. Ten children (5 males, 5 females) with same diagnosis received current OT therapy as a control group.

First group in addition to current treatment received daily splint, 3 hours a day for 6 weeks. Their training was based on family-based principles and play activities (the parents were given home program). Control group received 45 minutes current OT program for 3 times per week. Assessment was performed using grasp item of Quality of Upper Extremity Skills Test (QUEST) over six weeks. All children were assessed before intervention, 2^{nd}, 4^{th} and 6^{th} week's intervention. The data were analyzed using repeated measure to compare the effects of MCIM therapy during 6 weeks along with 2 weeks interval.

Results: The results of this study showed that there was significant difference of mean in experimental group as compare with control group from pretest to 2^{nd} weeks intervention (P=0.001) and from 2^{nd} to 4^{th} weeks intervention (P= 0.001) but there was no significant difference of mean between 4^{th} and 6^{th} weeks intervention (P= 0.071).

Conclusion: Results of this study supported using MCIM Therapy in children with hemiplegic cerebral palsy emphasizing family-based care. As the treatment was tailored to each child's capacity and interests, little frustration was experienced by the children that should be considered by occupational therapist.