

Original Paper

Effect of modified constraint induced movement therapy on quality of upper extremity skills in children with hemiplegic cerebral palsy

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Abstract

Background and Objective: Constraint induced movement therapy is an approach that with limitation of the healthy upper limb movement of a person with hemiplegia obligate to use the affected limb. This study was done to determine the modified constraint induced movement therapy on quality of upper extremity skills in affected limb in children with hemiplegic cerebral palsy.

Materials and Methods: This single blind randomized clinical trial was carried out on 21 children with hemiplegic cerebral palsy referred to rehabilitation centers in Tehran-Iran during 2008. Samples randomly were divided into experimental (n=11) and control (n=10). Common therapeutic physical practice was carried out for 6 weeks in both groups equally. In treatment group intervention was practiced by constrain induced movement therapy methods for 3 hours daily. Quality of upper extremity skills pre and post intervention based on the quality of upper extremity skills test (QUEST) was evaluated. Data were analyzed by SPSS-16 software, Kolmogrov-Smirnoff, chi-square, T student and repeated measurement tests.

Results: Mean age of children in the experimental group (7 girls, 4 boys) and control group children (5 female, 5 male) were 46.55±17.5 and 48.10±19.2 months respectively. Internal analysis of all items in interventional group were significant after 6 weeks of treatment (P<0.05). but in control group only grasp item was significant (P<0.05). Analysis between two groups did not show any significant difference in total and subtitle score including dissociated movement, weight bearing and protective extension. But only grasp subtitle showed significant difference between two groups (P<0.05).

Conclusion: This study showed that modified constraint induced movement therapy only affect in quality of grasp.

Keywords: Cerebral palsy, Modified constraint, Movement therapy

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