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Efficiency of Combining Hippotherapy With Hip-Knee-Ankle-Foot Orthosis and Dynamic Core Intervention for Maintaining Pelvic and Trunk Stabilization in Children with Cerebral Palsy of 2-10 Years of Age -A Randomized Controlled Trial

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Background: Hip-Knee-Foot orthosis is useful in maintaining proper alignment of body and preventing the contractures and progressive hip subluxation, while hippotherapy, an equine assisted therapy, deals in increasing the trunk and pelvic stability in spastic cp subjects combine with dynamic core strengthening protocol in CP subjects. This study evaluates the changes in postural control and balance, Gross Motor Function and Quality of Life(Qol) of children with cp undergoing hippotherapy for a period of six months. The aim of this study is focusing on the efficiency of hippotherapy combined with Hip-Knee-Foot Orthosis and Dynamic Core Intervention for maintaining the pelvic and the trunk stabilization in cerebral palsy.

Methods & Subjects: 20 subjects with spastic cp is taken in groups between 2 to 8 years based on inclusion & exclusion criteria. group A underwent hippotherapy protocol supported with Hip-Knee-Foot orthosis and Dynamic Core strengthening and group B underwent normal strengthening protocol supported with hip-knee-foot-orthosis. outcome measures, including the Gross Motor Function Measure and Functional Skills Scale were assessed before therapy and after the 8-weeks intervention, as outcome measures. The protocol is given for 45 minutes thrice a week for 8 weeks.

Results: While co-relating the results of pre and post recordings, there is gradually improvement in group A (hippotherapy protocol supported with hip-knee-foot orthosis and dynamic core intervention) than group B (normal strengthening protocol supported with hip-knee-foot-orthosis). The post readings show some increase in stability level of pelvic and trunk movements of group A than group B after 6 months of treatment protocol.

Keywords: Cerebral Palsy (CP), Hippotherapy, Hip-Knee-Ankle-Foot Orthosis, Pelvic & Trunk Stabilization.