Aquatic physical therapy protocol with emphasis on balance and gross motor function in children with cerebral palsy: A randomized clinical trial

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Cerebral Palsy (CP) affects motor and sensory systems, posture and balance, which generate functional limitations. The objective of this study was to evaluate the effects of an aquatic physiotherapy protocol on balance and gross motor function of children with CP level III of Gross Motor Function Classification System. Individuals were randomly in a Control Group (CG=6) which performed aquatic conventional therapies, or in Intervention Group (IG=6) which performed a specific aquatic protocol. There were 16 individual sessions of aquatic physiotherapy, twice a week, for 35 minutes and both groups did conventional physiotherapy out of water once a week. The groups were evaluated pre and post intervention with the following outcomes: Gait Visual Analogue scale, Gross Motor function Measure (GMFM-88), Pediatric Balance Scale, Dynamic Gait Index (DGI), Timed Up and Go, 10 meter walk test (10 MWT), Child Health Questionnaire (CHQPF-50). Significant improvement was found in total GMFM in the IG (p=0.028) post intervention, while in E dimension of GMFM both showed significant improvement, (IG p=0.026) and (CG p=0.046). In the 10 MWT the IG decreased the course time, with significant value (p=0.028). Significant improvements in balance were observed in the IG (p=0.041) post intervention in DGI scale. In quality of life (CHQPF-50), in the domain physical function, (IG/CG) the intergroup analysis post intervention shown positive results (p=0.054), in domain impact on parents time (p=0.043) both groups improved. Aquatic physiotherapy showed improvement in gross motor function, gait speed, balance and quality of life in children with CP.

Biography

Joyce Xavier Muzzi de Gouvea has completed his Graduation in Physiotherapy in 2005, Brazil. She has completed her Master's in Neuroscience and Behavior, specialist in Physiotherapy applied to Neurology and Acupuncture. She is currently a Physiotherapist at the Association for Assistance to the Disabled Child in the Aquatic Physiotherapy Sector.

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