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Effect of Plyometric Training on Shoulder Strength and Active Movements in Children with Erb's Palsy

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Abstract: ***Background:*** Children with Erb's palsy often have residual weakness of the affected shoulder musculature and limitation in arm movements resulting in difficulties of their functional activities.
Aim: This study aimed to determine the effect of plyometric training on shoulder strength and active movements in children with Erb's palsy. ***Methods:*** A total of 40 children with Erb's palsy (3-6 years) were randomly assigned into two groups; a control group received a selected physical therapy program and a study group received the same program as the control group in addition to plyometric training. All children were assessed pre and post 6 successive weeks of training using hand-held dynamometer for shoulder flexors and external rotators strength and active movement scale for active shoulder flexion and external rotation movements.
Results: Significant improvement was found in all measured variables of the control and study groups when comparing their pre and post treatment mean values except for the active shoulder external rotation movement of the control group. Comparing the post treatment mean values of all measured variables showed no significant difference between both groups, while the percent of improvement was greater in the study than the control group in all the measured variables.
Conclusion: Plyometric training is an effective training for improving strength and active movements in children with Erb's palsy.
Keywords: Plyometric training, Erb's palsy, shoulder strength, active movement scale.

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