



Schroth Three-Dimensional Exercises versus Trunk Rotation Exercises on Scoliosis and Balance in Hemiplegic Cerebral Palsy

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Abstract : Objectives: The purpose of this study was to investigate and compare the effects of Schroth three-dimensional (3D) and trunk rotation exercises on scoliosis and balance in hemiplegic cerebral palsy (CP). **Methods:** Thirty children with hemiplegic CP from both sexes ranging in age from 7 to 9 years were participated in this study. They were assigned randomly using opaque envelopes into two intervention groups (group A and B). Both groups underwent the same physical therapy program. In addition, group A received the Schroth 3D exercises, whereas, group B received the trunk rotation exercises. Both groups received the treatment program for 2 hour, 3 times/week, for three months. Assessment of Cobb angle and stability indices was conducted before and after three successive months of the treatment. **Results:** There was a significant decrease in Cobb's angle ($p = 0.02$) and stability indices ($p < 0.05$) of group A compared with that of group B after treatment. Moreover, a positive significant correlation was observed between Cobb's angle and stability indices ($p < 0.001$). **Conclusions:** Both Schroth 3D and trunk rotation exercises induced improvements in scoliosis and balance in hemiplegic CP, with greater effect was shown in the Schroth 3D exercises group. **Key words :** Cerebral palsy, Hemiplegia, Schroth method, Scoliosis, Trunk rotation exercises.

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