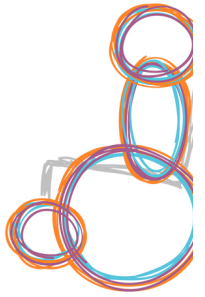


Multisite trial comparing the efficacy of constraint-induced movement therapy with that of bimanual intensive training in children with hemiplegic cerebral palsy

childhood
disability
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Summary

The aim of this study was to compare the outcomes of modified CIMT to those of bimanual intensive rehabilitation treatment (IRP) in children with hemiplegic cerebral palsy. Data was collected at the end of a 10-week program and longitudinally at 3, 6 and 12 months post intervention. One hundred and eleven participants were recruited from multiple centers in a cluster-randomized sequence. Participants were allocated to a mCIMT, a bimanual IRP, or a traditional rehabilitation program groups. The specifics regarding treatment in each group may be found in the article. Participants were further divided as having either a mild, moderate or severe motor impairment of the affected limb.

Results

All participants demonstrated a trend for positive change in upper limb function after intervention. Spontaneous use of the affected limb improved significantly in all three groups, however most significantly in the IRP group. The QUEST and the Besta Scale showed a statistically significant improvement for the mCIMT and IRP groups but not for the standard therapy group. mCIMT produced statistically significant improvements on the grasp subscale of the Besta Scale and the QUEST. The Besta Scale's ADL subscale improved significantly for the mCIMT and IRP groups. The IRP and mCIMT groups demonstrated statistically significant gains in movement dissociation of the upper limb and weight bearing. Overall, mCIMT demonstrated more significant achievements in fine grasp abilities of the affected hand whereas the IRP resulted in more spontaneous bilateral use. ADLs improve more significantly by IRP than by mCIMT, specifically in the younger children. This study also demonstrates that most positive results were yielded with intensive therapy than as compared to traditional therapy delivery.

Reference

Facchin, P., Rosa-Rizzotto, M., Visonà Dalla Pozza, L., Turconi, A,C,, Pagliano, E., Signorini, S...GIPCI Study Group. (2011). Multisite trial comparing the efficacy of constraint-induced movement therapy with that of bimanual intensive training in children with hemiplegic cerebral palsy. *American Journal of Physical Medicine and Rehabilitation*, 90(7), 539-53.

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