Effects of intensive therapy camps for lower limb function and trunk control in children with bilateral cerebral palsy

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Introduction:

Intensive therapy for upper limb in camp models (CIMT, HABIT) have been successfully applied in children with unilateral cerebral palsy (CP). However, to our knowledge, no study has concomitantly targeted lower limb function and trunk control as an intensive camp model in children with bilateral CP.

Patients and Methods:

Twenty four participants were included between 6-12 years old with bilateral spastic CP, and GMFCS-level II or III. Each intervention camp consisted of 10 days of 6 hours therapy per day. During the camp, six functional activities focusing on lower limbs and trunk were trained. Individual treatment goals were defined and exercises per activity were selected to address these goals. Participants were assessed at baseline, pre- and post-intervention. The current analysis includes preliminary data of a first set of outcome measures.

Results:

Friedman test of Gross Motor Function Measure (GMFM) dimension scores did not show significant differences (p>0.30) between 3 time points nor the GMFM total score (χ²=1.811, p=0.4). Results of the Trunk Control Measurement Scale (TCMS) showed a significant difference in scores between time points for the total TCMS (χ²=8.822, p=0.012) and the subscale ‘selective movement control’ (χ²=12.463, p=0.002). Post-hoc analyses showed a significant increase (p= 0.009 and 0.003, respectively) in median scores between pre- and post-test. No significant improvement on the TUG and 1MWT was found (p=0.30 and 0.12, respectively).

Conclusion:

These first results on a limited set of measures indicate a positive effect of intensive intervention on trunk control.