

**135. Título: Motor and functional outcomes of children with myelomeningocele after two different physical therapy protocols**

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**Palavras Chave:** Meningomyelocele; Physical Therapy Specialty; Therapeutical Approaches

**Introdução e objetivos:**

We investigated whether infants with MMC would improve motor function and/or functional independence after physical therapy; compared the outcomes of conventional physical therapy (CPT) to a program based on reflex stimulation (RPT); investigated the relationship between motor function and functional independence.

**Métodos:**

Twelve children were allocated in CPT (n=6, mean age 18.3 months) or RPT (n=6, mean age 18.2 months). Interventions consisted of 10 45-minute-weekly sessions. Children were assessed with the Gross Motor Function Measure (GMFM) and Pediatric Evaluation of Disability Inventory (PEDI) before and after the treatment. Mann-Whitney tests compared the improvement on GMFM and PEDI (CPT vs. RPT) and Wilcoxon test compared the performance (before vs. after the treatment). Spearman tests investigated correlations between GMFM and PEDI.

**Resultado:**

Groups showed improvement on GMFM and on self-care and mobility domains of PEDI. No differences between the groups were observed, before and after the intervention. Motor ability and functional independence strongly correlated. The Mann-Whitney test showed no significant difference between the groups on GMFM (total score: U=9.0, p=0.54; score ABC: U=11.0, p=0.84). The Mann-Whitney also demonstrated no significant difference on PEDI (self-care: U=9.5, p=0.55; mobility: U=8.0, p=0.42; social function: U=5.0, p=0.15).

**Discussão e conclusão:**

The present study compared two treatment protocols for children with MMC and in both groups postural control was improved, mainly while laying down and sitting. CPT probably improved this control with adaptations and compensations, with the training primarily directed to strengthen and optimize the preserved sensorimotor functions and and taking advantage of cognitive abilities. The reflex stimulation aimed to facilitate the conduction of stimuli from the extremities to the cortex through the remaining afferent pathways. In the RPT, there was possibly an increase of offer of sensory information,

peripherally. This higher amount of sensory information arriving at the cortex is important to improve sensory-motor integration and the quality of emitted responses. Conclusion: Two different physical therapy protocols resulted in motor and functional improvement in children with MMC. The gains on motor ability were associated to a better functional status. Trabalho 1: Aprovado com o título "Caracterização e estimulação da função motora de membros inferiores em crianças de 0 a 4 meses com mielomeningocele." Aprovado pela CAPPesq com protocolo de número 0410/07 Trabalho 2: Aprovado com o título " Validação da versão brasileira da "escala de qualidade de vida na espinha bífida". Aprovado pela CAPPesq com protocolo de número 0062/08 Trabalho 3: Aprovado com o título "Efeitos do uso da Happy Strap o controle postural de crianças com síndrome de Down". Aprovada pela Plataforma Brasil e CEP do HCFMUSP com CAAE: 11498013.6.0000.0068