

BRAIN MOTOR FUNCTION IN ADOLESCENTS BORN VERY PRETERM AND INFLUENCE OF KANGAROO MOTHER CARE : A PILOT STUDY WITH TRANSCRANIAL MAGNETIC STIMULATION (PUBLISHED IN ACTA PÆDIATRICA 2012 ISSN 0803-5253)



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Background:

Preterm delivery disrupts the normal development of interhemispheric and intracortical motor networks, which can persist throughout childhood and adolescence. Early interventions such as Kangaroo Mother Care (KMC) that provide a nurturing, less stressful extrauterine environment could protect against the deleterious effect of prematurity on these networks.

Objective:

To explore cognitive, behavioural neuroimaging and neurophysiological variables and school performance in a sample of subjects who participated in a RCT comparing KMC and traditional care in incubators early in life together with normal term (control) subjects were evaluated when reaching 14-15 years of age. Neurophysiological results are presented in this poster.

Design/Methods:

Forty-eight adolescents were enrolled: 21 preterm with KMC and 18 preterm with no KMC, all less than 33 weeks of GA at birth, and 9 term . Transcranial magnetic stimulation (TMS) applied to the primary motor cortex was used in each hemisphere to determine motor evoked potentials (MEP) in hand muscles, intracortical inhibition and facilitation, and short interhemispheric inhibition.

Results:

MEP latency ($P < 0.05$) was lengthened, while short interhemispheric inhibition occurrence was decreased, latency delayed and duration shortened ($P < 0.0001$) in preterm adolescents who did not receive KMC as compared with those who did and those born at term, boys with no KMC showing more delayed interhemispheric inhibition in the dominant hemisphere ($P < 0.0001$). The results were

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