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Cyclic Alternating Pattern (CAP) analysis in children affected by migraine without aura: a preliminary study

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Introduction: Children with migraine headaches appear to have a range of sleep disturbances. The aim of the present study is to assess the NREM sleep instability in a population of school-aged individuals affected by migraine without aura MoA.

Materials and Methods: 33 children with MoA (20 males, 13 females, mean age 10.45 years, SD 2.06) underwent overnight PSG recordings and the Cyclic alternating pattern (CAP) was performed, according with international criteria.

Results: MoA group shows significant reduction in sleep duration parameters (TIB, SPT, TST; $p \leq 0.001$ for all) and a significant increase in awakenings per hours (AWK/h) ($p = 0.008$). About the NREM sleep instability analysis findings, the MoA children show a reduced CAP rate% ($p \leq 0.001$), CAP rate% in S1 ($p \leq 0.001$) and in CAP rate% in SWS ($p = 0.004$). Moreover, the A phases distribution were characterized by significant reduction in slow wave components (Total number CAP A1%, CAP A1 index) ($p \leq 0.001$) and an increasing in fast components (Total number of CAP A2% and CAP A3%) representation. MoA children show also an increased A1 and A2 mean duration ($p \leq 0.001$).

Conclusion: Poor sleep quality and NREM sleep instability are associated with MoA in children.

Biography

Marco Carotenuto completed his Degree in Medicine and Surgery in 2000 and Specialist degree in Child and Adolescent Neuropsychiatry in 2005. In 2008, he completed his Doctorate in Behavioural and Learning Disorders Sciences. From 2008 to 2011, he is Associate Professor and the Chief of the Unit of Child and Adolescent Neuropsychiatry at Università degli Studi della Campania Luigi Vanvitelli. Areas of clinical research are child neurology, pediatric sleep disorders, polysomnography, pediatric primary headaches, and pediatric rehabilitation.

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