Abstract

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Clinical, EEG, electromyographic and polysomnographic studies in restless legs syndrome caused by magnesium deficiency.

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OBJECTIVE: The present paper reports biochemical and neurophysiological investigations in ten cases with restless leg syndrome. Other neuropsychiatric affections and factors which could generate the symptomatology of restless legs syndrome were not included.

FINDINGS: The EEG recordings demonstrated evident reticular neuronal hypersynchrony generated by hyperpnoea (sinusoidal slow waves). The classical EEG investigations pointed out neuromuscular hyperexcitability, but some modifications of the functional parameters of the neuromuscular excitability and conductibility (signs of neuropathy) were also noticed. In all the cases, continuous 8-hour polysomnographic recordings and monitorization on infrared TV screen were performed.

SUMMARY: Investigations reported important disorders of sleep organization, agitated sleep with frequent periods of nocturnal awakenings, increase of the durations and percentages of light slow-wave sleep (LSWS) and rapid and frequent changes of various stages of LSWS, a decrease of duration and percentage of DSWS, a decrease of duration and percentage of REM sleep (as in other parasomnias caused by magnesium deficiency) and nocturnal EEG anomalies (long discharges of sinusoidal slow waves, of sharp waves and of sharp slow waves appearing in the LSWS stages with the disappearance in the REM sleep).

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