

identified all NM episodes, and different variables were collected: episodes number, duration, sleep phase, index (global sleep, REM and NREM sleep), movement type, sleep fragmentation, sleep efficiency, exam reason, sleep complains, Epworth Sleepiness Scale (ESS), medication and sleep comorbidities.

Results: Two hundred and nine NM events were analyzed from 11 patients undergoing PSG study. From these patients, 81.8% performed video-PSG, 45.5% were females and mean age was 34 ± 4 years-old. The mean episodes in each patient were 19 ± 12 (max 50, min 7). Most episodes occurred during REM sleep (80.9%). The episodes duration varied between 0.1 and 0.9 s. The mean global NM index was $2.7 \pm 1.8/h$, REM index $11.8 \pm 9.1/h$ and NREM index $0.7 \pm 0.9/h$. From all NM analyzed, they were accompanied by another movements type, like leg movements in 14.8% and pelvic movement in 4.8%. All patients complained about nonrestorative sleep, sleep fragmentation and most of them sleepiness (72.7% with ESS ≥ 10) with a mean ESS of 13 ± 6 (max 21, min 0). From 209 episodes, 57% were accompanied by arousal. Only 5 patients presented with another sleep diagnosis (4 apnea, 1 PLMS), and from all episodes only 11.0% were related with hypopneas.

Conclusion: Most patients presented with NM during REM sleep and with significant index during this phase. In 57% episodes we identified a related arousal. A patient minority presented with another sleep diagnosis beyond NM, so although this is a retrospective and descriptive study, we can advocate that a probably reason for sleep fragmentation and sleepiness in these patients is the NM presence. We conclude that NM should be recognized and its effect in sleep fragmentation and sleepiness must be considered.

Conflict of Interest: No.

P1266

Poster Session-Neurology-Day 3 (Poster)

Decreased Delta/Beta ratio index as a state-independent signature of sleep state misperception in insomnia disorder

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Introduction: Sleep State Misperception (SSM) is the tendency of Insomnia Disorder (ID) patients to overestimate Sleep Latency (SL) and underestimate Total Sleep Time (TST). Literature exploring topographical components in ID with SSM is scarce and does not allow us to fully understand the potential mechanisms underlying SSM. This study aimed to evaluate the existence of sleep EEG topography alterations in ID patients associated with SSM compared to Healthy Controls (HC), focusing on the Sleep Onset (SO) and the whole night.

Method: Twenty ID patients (mean age: 43.5 ± 12.7 ; 7M/13F) and 18 HCs (mean age: 41.6 ± 11.9 ; 8M/10F) underwent a night of polysomnography and completed sleep diaries the following morning upon awakening. Two SSM indices, referring to the misperception of SL (SLm) and the TST (TSTm), were calculated by comparing objective and subjective sleep indices extracted by polysomnography and sleep diary. According to these indices, the entire sample was split into 4 sub-groups: ID + SLm and HC-SLm; ID + TSTm and HC-TSTm.

Results: Considering the SQ, the two-way mixed-design ANOVA showed a significant main effect of Groups pointing to an increased beta activity involving anterior and temporoparietal cortical derivations ($p \leq 0.023$) and to decreased delta/beta ratio in the whole scalp topography ($p \leq 0.040$). Moreover, we found a significant ($p \leq 0.024$) interaction effect for the sigma and beta bands. Post Hoc tests showed higher sigma and beta power in anterior and temporo-parietal sites during the SO period in IDs + SLm compared to HC-SLm. Considering the whole night, the unpaired t-test revealed in IDs + TSTm significantly lower delta power during NREM ($p \leq 0.035$) and lower delta/beta ratio index during NREM and REM sleep ($p \leq 0.034$) compared to HCs-TSTm. Finally, we found diffuse significant negative correlations between SSM indices and the delta/beta ratio during the SO ($r \geq -0.589$; $p \leq 0.011$), NREM ($r \geq -0.424$; $p \leq 0.042$), and REM sleep ($r \geq -0.372$; $p \leq 0.042$).

Conclusion: The main finding of the present study suggests that higher SL overestimation and TST underestimation are both related to diffuse cortical hyperarousal, interpreted as a state-independent electrophysiological correlate of the SSM, both during the SO and the whole night.

Conflict of Interest: No.

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Determining factors of substance use patterns in patients with narcolepsy type 1: A multicenter national study

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