

P741 | Pupillary light reflex in the early stages of progression to alpha-synucleinopathies: A preliminary cross-sectional study in isolated REM sleep behaviour disorder patients

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Objectives/Introduction: Previous pupillometric studies reported early cholinergic deficits in Parkinson's Disease (PD) and Alzheimer's Disease patients. Isolated rapid eye-movement sleep behaviour disorder (iRBD) has been recognized as an early stage of neurodegenerative diseases, mainly PD. Of note, cholinergic denervation has also been reported in iRBD patients. Given these premises, the aim of the present study was to evaluate cholinergic dysfunction in patients with iRBD. To this end, a portable pupillometer was used to assess changes in the Pupillary Light Reflex (PLR) of these patients compared to healthy controls (HC).

Methods: 24 polysomnography-confirmed iRBD patients (29.2% females; mean age: 69.04 ± 8.67) and 7 HC (57.1% females; mean age: 60.71 ± 10.01) were involved in the present study. All participants underwent a comprehensive clinical evaluation, which included neuropsychological and pupillometric assessments. Based on neuropsychological performances, the possible presence of mild cognitive impairment (MCI) was evaluated, resulting in 13 iRBD patients with MCI (iRBD+MCI; 54.5% females; mean age: 70.36 ± 8.87) and 11 iRBD patients without MCI (iRBD-NMCI; 7.7% females; mean age: 67.92 ± 8.69). The pupillometric evaluation was performed by means of the portable pupillometer “NeuroLight” (version 1.16 – IT; IDMED, France). Ten acquisitions for each subject were recorded. Using these data, the following parameters were obtained: baseline pupil diameter (mm), pupil diameter variation after flashlight presentation (mm and percentage), latency of pupil's reaction to light (ms) and maximum constriction velocity (VCmax; mm/s). Data of the two groups were compared adjusting for age and gender.

Results: iRBD patients showed a significantly altered PLR compared to HC in all parameters ($p < 0.001$), except for the latency parameter. Specifically, iRBD showed significantly higher pupil diameter variation, lower baseline pupil diameter and lower VCmax compared to HC. Furthermore, when comparing these parameters between iRBD+MCI and iRBD-NMCI, we observed no statistically significant difference between these two groups. Of note, both iRBD+MCI and iRBD-NMCI showed significantly altered PLR compared to HC ($p < 0.05$).

Conclusions: The present study showed an alteration in PLR of iRBD subjects. These preliminary findings suggest that pupillometry may represent a possible supportive tool in the detection of early cholinergic dysfunction in the progression to alpha-synucleinopathies.

Disclosure: No

P742 | How to COVID-19 affected sleep talking episodes?

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Introduction and objectives: Current literature documents the negative effect of COVID-19 on sleep and mental health. The drastic changes in nocturnal and diurnal habits increase symptoms of stress, anxiety and depression, and low sleep quality and sleep hygiene. The symptoms listed and sleep are closely related, and it has been repeatedly demonstrated how stressful factors and/or bad sleep habits can affect parasomnia behaviours. The high prevalence of nightmares during the pandemic period could reflect this relation. However, the studies focusing on the influence of COVID-19 on other parasomnias are scarce. We present a preliminary study focusing on the impact of the pandemic on Sleep Talking (ST).

Method: We recruited $N = 29$ participants with frequent ST ($F = 23$; age mean: 23.48) during the pandemic (January 2021–October 2021) and selected $N = 27$ participants with frequent ST episodes (STs) ($F = 21$; age mean: 23.55) from a previous study conducted during a pre-COVID period (from 2017 to 2018). The inclusion criteria were:

1. Frequent STs, as reported in the Munich Parasomnia Questionnaire (score of 5–7 on the item related to STs);
2. Absence of medical conditions;
3. Absence of other sleep disorders except for ST;
4. No drug or alcohol abuse.

For seven days, all participants performed home monitoring. They were instructed to complete sleep logs and audio-recorded their vocal activations.

Results: The results showed a higher STs frequency in the ST group during the pandemic (Mann-Whitney $U = 543.000$; $p = 0.013$). Moreover, we found a positive correlation between STs and the intra-night wake (WASO), exclusively in the pandemic group ($\rho_s = 0.388$; $p = 0.037$). However, there were no differences in the sleep variables between the two groups.

Conclusion: The influence of stressful factors on ST is poorly understood. The pandemic group produced more STs than the pre-pandemic group. Consistently with the literature, this result could reflect the stressful effect of COVID-19 on the frequency of STs. Although the findings revealed no differences in sleep variables, the correlation between STs and WASO may show the indirect negative influence of COVID-19 on nocturnal sleep. Further studies should focus on the relation between ST and the pandemic trend.

Disclosure: No