Conclusions: Specificity and positive predictive value of the RBD screening questionnaires were low to very low in this cohort, underlying the need of a V-PSG for RBD diagnosis and that questionnaires should not be used to select "probable RBD" patients to be included in studies.

PAROXYSMAL AROUSALS IN SLEEP-RELATED HYPERMOTOR EPILEPSY (SHE) AND SIMPLE AROUSAL MOVEMENTS IN DISORDERS OF AROUSAL (DOA): SEMIOLOGICAL AND CLINICAL FEATURES MAKE A DIFFERENCE

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Introduction: Sleep-related hypermotor epilepsy (SHE) is a focal epilepsy characterized by seizures occurring mostly during sleep, ranging from brief paroxysmal arousals (PAs) to hyperkinetic seizures and ambulatory behaviors. PAs are brief and stereotypic seizures representing the beginning of a major seizure. A correct PAs characterization is clinically relevant for many reasons, although the most recent Consensus Conference has underscored that if the captured episodes are minor motor events or PAs, the clinical diagnosis may be unreliable. PAs recognition could be useful for SHE diagnosis when video-polysomnography (VPSG) does not allow recording major seizures, and a correct identification of PAs should be important to define the frequency of SHE seizures and targeting of therapy. Furthermore, PAs need to be distinguished from brief episodes typical of disorders of arousal (DOAs), a group of non—rapid eye movement (NREM) parasomnias that require totally different management in comparison with SHE. DOAs, which include Sleepwalking, Sleep terrors and Confusional arousals, are characterized by recurrent episodes of incomplete awakening from sleep with abnormal sleep-related complex movements and behaviors and partial to complete amnesia for the episodes. A recent VPSG study showed that DOAs are characterized by events of increasing intensity and complexity with briefer episodes appearing in addition to major ones. These episodes, characterized by head, head and limbs, or head and trunk movements, have been called simple arousal movements (SAMs). In these cases, distinguishing PAs from SAMs remains difficult even for epilepsy and sleep experts. We performed a characterization of PAs and SAMs to identify VPSG features that can contribute to the diagnosis of SHE or DOAs.

Materials and Methods: Fifteen SHE, 30 DOAs adult patients, and 15 healthy subjects underwent full-night VPSG. Two neurologist experts in sleep disorders and epilepsy classified all the sleep-related movements and episodes recorded. For each PAs and SAMs, sleep stage at onset, duration, limb involvement, progression, and semiology have been identified.

Results: A total of 121 PAs were recorded, emerging mostly during stage 1-2 NREM sleep (median duration: 5 seconds). At the beginning, 78 (64%) PAs were characterized by hyperkinetic movements and 43 (36%) by tonic/dystonic postures, involving more than three non-contiguous or all body parts. The standard was a constant progression of movements during PAs without any motor arrests. In DOAs patients a total of 140 SAMs were recorded (median duration: 12 seconds) mostly emerging during stage 3 NREM sleep. In SAMs, we did not observe any tonic/dystonic or hypermotor patterns or stereotypy; motor arrest was present over the course of about half of the episodes. In comparison with both DOA and healthy subjects, SHE patients showed a higher number of sleep-related movements per night and a reduction of sleep efficiency.

Conclusions: PAs and SAMs present different semiological and clinical features. Their recognition could be useful to drive the diagnosis when major episodes are not recorded during VPSG in patients with a clear clinical history of SHE or DOAs.

SLEEP TALKING AS DREAM ENACTING BEHAVIOR: A NEW PERSPECTIVE TO STUDY COGNITION DURING SLEEP

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Introduction: Sleep Talking (ST) is characterized by the production of unaware linguistic vocalizations (STs) during sleep. On the one hand, ST could allow researchers the direct observation of cognitive processes during sleep. Interestingly, recent findings reported the replay of verbal material learned during an episode of ST. This phenomenon was considered as an "overt replay" of high cognitive processes and may help sleep-related memory consolidation. However, data on this issue are still lacking, and the role of ST in memory consolidation is poorly understood.

On the other hand, the vocal activations also showed the incorporations of waking experiences. Besides, some studies reported a high concordance between vocalizations and oneiric contents (Dream Enactment Behavior), providing a potential access to mental activity during sleep. It is known that the waking-life experiences could be incorporated according to the day-residue effect or dream-lag effect. Therefore, the incorporations of the verbal task or daily experiences could represent a reprocessing of semantic and/or autobiographical memories. Overall, the STs might permit the direct observation of these cognitive processes ongoing.

Our explorative study had two independent aims:

1. The investigation of autobiographical incorporations into dream reports and STs. According to the "continuity hypothesis," the incorporations into STs could represent "day-residue effect" or "the dream-lag effect";

2. The assessment of ST's impact on memory consolidation, according to two alternative hypotheses: (A) the replay of verbal content on STs increases the sleep-dependent gain (defined as the difference between morning and evening recall) in the ST group, or (B) the sleep fragmentation due to STs is associated to a decreased gain.

Materials and Methods: We recruited N=28 participants with ST (F=23; age mean: 23.71) and N=27 controls (F=21; age mean: 24.44). For eight days, participants performed home monitoring. They were instructed to complete daily logs (for seven evenings), sleep logs, and record their oneiric contents every morning. On the 8th day, a word-pair task was administered. ST subjects audio-recorded their vocal activations.

Results: Results showed a higher gain in the control than ST group (t= 2.103; p=0.04), but no significant correlation was observed between the number of STs and gain. Notably, one ST subject produced a word semantically related to the task and revealed an increase in the gain.

The incorporations of wake-experiences in dream content revealed a dream lag effect of personally significant events in both groups (F= 3.510; p=0.04). There was no correspondence between the daily activities, dream content, and STs, although some semantic correspondences were observed between STs and dream recalls (N=4).

Conclusions: In conclusion, our results supported the idea that STs could represent the overt expression of semantic memories consolidation.

The worst performance of the ST group seems coherent with the hypothesis that sleep fragmentation due to STs is associated with a decreased sleep-dependent gain, although a polysomnographic assessment is needed.

Consistently with literature, STs represent a window towards the dream activity, and multiple awaking protocols immediately after STs could provide more information about correspondence between STs and dream reports and the reprocessing of autobiographical memories.

THE AROUSAL DISORDERS QUESTIONNAIRE: A NEW AND EFFECTIVE SCREENING TOOL

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