parietal-occipital cortex (P-OCC) were entered stepwise into a series of multiple linear regression models to predict each actigraphic outcome.
Results: For SE, the regression analysis yielded a significant three predictor model (adjusted R2=.59), p=.0001, including mPFC choline (Cho; β=-.60), P-OCC N-Acetylaspartate (NAA ; β=.56), and P-OCC glutamate+glutamine (Glx; β=-.33). Better SE was associated with a combination of decreased Cho within the mPFC, and increased NAA and decreased Glx within the P-OCC. SOL was predicted by mPFC Cho alone (β =.60; adjusted R2 = .33), p=.002. This suggests that greater Cho within the mPFC was associated with a longer latency to fall asleep. Finally, for WASO, the regression analysis yielded a significant two predictor model, (adjusted R2 = .39), p=.002, including mPFC Cho (β = .56), P-OCC NAA (β = -.41). This suggests that a combination of greater Cho within the mPFC and decreased NAA in the P-OCC was associated with more minutes of wake after sleep onset.
Conclusion: Sleep quality was predicted from brain metabolites within the medial default mode network (DMN), an interconnected system of cortical regions that is normally deactivated during effortful cognitive processing. Sleep quality was predicted by a combined pattern of metabolites consistent with greater neuronal integrity, reduced cellular turnover, and lower excitatory neurotransmitters. Findings suggest potential metabolic and neuroanatomic targets for enhancing brain health to facilitate sleep quality.
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CIRCADIAN VARIATION OF ABSENCE SEIZURES IN AN ANIMAL MODEL OF HUMAN LEUKODYSTROPHY (H-ABC)

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0**Introduction:** Hypomyelination with atrophy of the basal ganglia and cerebellum (H-ABC) is a human leukodystrophy is due to a mutation in the tubulin b 4a (TUBB4A) and the taiep rats is the only available model of this human disease with similar signs in the magnetic resonance imaging and a mutation in the TUBB4 that induced an accumulation of microtubules in the cytoplasm and its processes in the oligodendrocytes. Taiep rats had spike-wave discharges (SWD) that are similar to absence epilepsy with a progressive increase with the age of the subjects. The aim of this study is to analyze the circadian distribution of SWD on male taiep.
Methods: We used 16 male taiep rats at 6 and 9 months of age. All rats were kept in standard conditions with a 12/12 light-dark cycle (lights on at 0700) and free access to rodent food pellets and purified water and were implanted for EEG, EMG and EOG recordings to characterize the frequency and duration of SWD. All procedures followed the NIH rules, and the protocol was approved by BUAP-IACUC.
Results: The number of SWD are higher in male rats at 9 with respect to 6 months of age (P≤0.05), and also had higher incidence during the light phase with respect to the dark phase (P≤0.05). The duration of SWD had also a greater duration during the light period than the dark phase (P≤0.05).
Conclusion: Our results showed that SWD has higher incidence of SWD and of longer duration during the light period when the rats had more sleep suggesting that the neurotransmitters that are released during sleep facilitate the discharge in the thalamo-cortical circuit that support SWD.

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