

The diagnosis was consistent with the ICSD-R. Five alternative definitions of cataplexy were compared: C1) self-report; C2) medical chart review; C3) weakness when telling or hearing a joke OR when laughing; C4) weakness when telling or hearing a joke; and C5) weakness when telling or hearing a joke AND when angry. We used McNemar's test to compare sensitivity and specificity for HLA-DQB1*0602 status among these definitions.

Results: 181 narcolepsy patients provided complete data with mean age 46.3 years old (SD = 16.2), 64% women, and 50% positive for HLA-DQB1*0602. Overall, definition C1 showed 66% with cataplexy; C2, 59%; C3, 55%; C4, 46%; and C5, 29%. Sensitivity fell and specificity rose from definition C1 to C5. For sensitivity of detecting HLA-DQB1*0602 positivity, C1 was the highest at 76%, and C5, the lowest at 42% ($P < 0.001$). For specificity of detecting HLA-DQB1*0602 negativity, C5 was the highest at 83%, and C1 the lowest at 43% ($P < 0.001$). C4 had the highest positive predictive value at 73% as well as the highest negative predictive value at 69%.

Conclusion: In discerning HLA-DQB1*0602 status in this epidemiologic study, defining cataplexy as the presence of weakness when telling or hearing a joke and with anger (C5) is the most specific, while self-reported cataplexy (C1) is the most sensitive.

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SLEEPINESS AND FATIGUE IN HABITUAL MIDRANGE AND LONG SLEEPERS

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Introduction: Much of the literature on the association linking sleepiness and sleep duration is based on studies of the "U-shaped" relationship between sleep length and morbidity/mortality. These investigations as well as recent studies of excessive daytime sleepiness and hypersomnia suggest that such "healthy midrange" findings are also applicable to daytime sleepiness and fatigue. The assumption that the U-shaped relationship applies to such daytime aspects is premature, however. There are several important demographic and circadian confounds as well as sleep, measurement, and illness related factors which affect this relationship. In the present investigation we evaluate the connection between long sleep, on the one hand, and daytime sleepiness and fatigue, on the other, in three samples where long and midrange sleepers who do not experience the confound of insomnia are compared.

Methods: Participants comprised three samples which excluded those with difficulty initiating or maintaining sleep: 54 older adults (mean age = 71), 33 college students (mean age = 20), and 30 adults with diagnosed apnea (mean age = 63) who had not yet begun treatment. Participants were divided into habitual long ($= > 8$ hr nocturnal sleep time) and midrange sleepers (7 - 7.9 hr). All completed questionnaires assessing sleep and related daytime variables. They indicated the number of hours they habitually sleep each night and completed the Stanford Sleepiness Scale and the Empirical Sleepiness and Fatigue Scales.

Results: All three samples showed similar results: habitual long and midrange sleepers did not differ on any measures of daytime sleepiness or fatigue. Total nocturnal sleep time and Stanford Sleepiness Scale scores were not correlated significantly in any of the samples.

Conclusion: Once insomnia is ruled out as a confound, habitual long sleep does not appear to be a pathological condition. Rather, it seems to be an expression of variability in human sleep.

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TRAUMATIC BRAIN INJURY INDUCED HYPERSOMNIA FOLLOWING REPETITIVE BLAST INJURIES IN IRAQ

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Introduction: Traumatic Brain Injury (TBI) has been shown to cause several sleep disorders, but its mechanism is poorly understood. Although rarely reported, single event blunt head trauma has been shown to cause narcolepsy and hypersomnia. The effects of repetitive head traumas on sleep are unknown. No cases of posttraumatic narcolepsy/hypersomnia following this repetitive injury pattern have been previously reported.

Methods: We present five cases of U.S. Service members who developed hypersomnia after sustaining TBIs following multiple Improvised Explosive Devices (IED) blast injuries while serving in Iraq. All patients underwent a thorough evaluation, including neuroimaging, overnight polysomnography, and Multiple Sleep Latency Test (MSLT) to evaluate excessive daytime sleepiness.

Results: Five patients with hypersomnia following repetitive blast injuries and TBIs were identified (80% were men, mean age was 27.0 ± 3.4 years old). Mean sleep latency on MSLT was 6.8 ± 4.8 minutes. Sleep onset REMs were present in all patients, four of which had ≥ 2 . Mean time from TBI to diagnoses was 21.6 ± 5.9 months.

Conclusion: We present 5 cases of PTN/PTH following TBIs resulting from multiple blast injuries. While uncommon, PTN has been reported after single blunt trauma. This injury pattern represents a novel etiology for secondary sleep disorders that may be overlooked.

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RELATIONSHIP BETWEEN KLEINE-LEVIN SYNDROME AND UPPER RESPIRATORY INFECTION IN TAIWAN

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Introduction: The etiology of Kleine-Levin syndrome (KLS), characterized by recurrent episodes of hypersomnia remained unknown despite the hypothesis to be an auto-immune disorder. A new episode of hypersomnia is often preceded by an acute flu-like fever, or upper airway infection 3 to 5 days before symptom onset. Considering the above information we investigated the relationship between occurrence of mild respiratory infection and occurrence and the seasonality of episodes of hypersomnia.

Methods: 30 patients (26 males and 4 females, mean onset age 13.23 years, ranged 9 to 17) diagnosed with KLS based upon ICSD-II criteria and with long term follow-up both during symptomatic and asymptomatic episodes were investigated. We compare the timing of the hypersomnic episodes with the calendar reports of URI events obtained from the national health service on age matched Taiwanese general population subjects for the years 2006 and 2007. Bivariate correlations were performed with SPSS version-13.

Results: The bivariate correlation between occurrence of KLS episodes and URI in the general population is significant ($P = 0.042$). When following the national health information records, we subdivide the infection in "acute upper respiratory infections", "acute bronchitis and bronchiolitis" and "chronic pharyngitis and nasopharyngitis", and compare the results with onset of hypersomnia, the results are again significant at respectively $P = 0.043$, $P = 0.037$ and $P = 0.010$. Our analyses also show that there is a strong positive correlation between higher URI reports in a given season and higher report of symptomatic hypersomnia.

Conclusion: URIs and KLS symptomatic episodes are significantly correlated, and there is a strong seasonal distribution for both. This re-