Central hypersomnias

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Annotated Reference List

Traumatic brain injury (TBI)

Three major papers shed new lights on TBI-associated sleepiness and mechanisms


Comment: In 42 patients with severe TBI, patients had higher objective hypersomnia (sleep excess and short MSLT) than controls, despite having no subjective sleepiness, 6 months after TBI. Intracranial bleeding and worse Glasgow scores predicted objective sleepiness.


and


Comment: In the brains of people having died from TBI, the major loss of neurons was found in the hypothalamic histaminergic neurons, and, to a lower extent, in hypothalamic melanocortin neurons and in serotoninergic neurons of the dorsal raphe nucleus in the brainstem. Neurons involved in REM sleep controls (orexin, PPT and LDT) were relatively spared.

Narcolepsy

No paper on narcolepsy found this year in the Lancet Neurology, Brain, Annals of Neurology, Neurology and JAMA Neurology journals. Most papers were found the the journal SLEEP and came from large, controlled series.

Comment: *this basic study in a large European series controlled for HLA DQB1*06 :01 found 3 new class I alleles (A, B and C) associated to narcolepsy, suggesting a CD8T or NK cytotoxic mechanism.*


Comment: *a nice phenotypic comparison of African- vs. Caucasian-American, showing that most AA NT1 patients are without cataplexy, suggesting this ethnicity protects them from cataplexy, despite severe sleepiness, obesity and hypocretin deficiency.*


Comment: *the authors found a high frequency of clinically significant ADHD symptoms (on a questionnaire) in children with narcolepsy without cataplexy (35%) and with cataplexy (19%), which were modafinil-resistant.*


Comment: *two studies from different countries found that 77% of patients with narcolepsy were lucid dreamers. In addition, 30 episodes of lucid REM sleep were obtained during naps in 12 patients, suggesting narcoleptics are proficient lucid dreamers, which could be useful for treating their nightmares, but also as an efficacious « easy » model of lucid dreaming.*

6) Cairns A, Bogan R. Prevalence and clinical correlates of a short onset REM period (SOREMP) during routine PSG. *Sleep* 2015;38:1575-81


Comment: *these two studies confirms the high specificity (but low sensitivity) of nocturnal SOREMP for narcolepsy diagnosis, whether during routine PSG in adults in any sleep center or for child narcolepsy.*

Comment: Because orexin is associated with reward process, one may expect orexin-deficient patients to have less addiction. In contrast, patients with NT1 smoke and drink more than controls, without having more abuse of tobacco and alcohol, or any other drug.


Comment: This second generation dopamine and noradrenaline transporter inhibitor reduces sleepiness (but not cataplexy) in patients with narcolepsy.

Idiopathic hypersomnia (IH)


Comment: This simple macrolide has GABA-A antagonist effects, and reduced subjective sleepiness (but not psychomotor performance) during 2 weeks in patients with various hypersonias but evidence of a GABA-A modulatory petide in CSF.


Comment: This first level-1 study confirms the benefit of modafinil in patients with IH and short MSLT. A missing link, useful for convincing health authorities (not physicians, who know it for long).


Comment: A chart review shows that off label use of sodium oxybate in IH reachs as good results as in NT1, plus reduces severe morning inertia in 70% of the patients.

Kleine-Levin syndrome


**Comment:** Five important studies from large series this year in KLS, showing that:

- one third of patients have long (>1 month) episodes
- one third of patients have reduced attention/verbal memory during asymptomatic periods
- 8% of cases are familial, mostly in the same generation
- There is a mild (1/3) decrease in orexin CSF levels in symptomatic vs. asymptomatic periods
- Fortunately, a controlled open study shows that lithium therapy is beneficial (stops or reduces episodes frequency, with 1 month less per year in episode) in 76% of 70 patients with KLS.