

2009 Nishino S

Dernière mise à jour: 06-04-2010

Decreased CSF histamine in narcolepsy with and without low CSF hypocretin-1 in comparison to healthy controls.

Nishino S, Sakurai E, Nevsimalova S, Yoshida Y, Watanabe T, Yanai K, Mignot E. Sleep and Circadian Neurobiology Laboratory, Center for Narcolepsy, Stanford Sleep Research Center, Stanford University, MSLS Bldg Room P213, 1201 Welch Road, Palo Alto CA 94305, USA. nishino@stanford.edu

Cet article montre une diminution de l'histamine dans le liquide céphalo rachidien de certains patients narcoleptiques; mais on retrouve aussi cette diminution chez certains témoins même si en moyenne chez les narcoleptiques le taux d'histamine est inférieure à ceux des témoins sains. Le taux d'histamine est encore plus faible chez les narcoleptiques avec déficit en hypocretine (oréxine) que chez les narcoleptiques non déficitaires en hypocretine.

PS : La majorité (88-93%) des narcoleptiques cataplectiques positifs pour le HLA DQB1*0602 présente un taux anormalement bas d'hypocretine dans le liquide céphalo rachidien. Mais ce n'est pas 100%.

Nishino S, Sakurai E, Nevsimalova S, Yoshida Y, Watanabe T, Yanai K, Mignot E.
Decreased CSF histamine in narcolepsy with and without low CSF hypocretin-1 in comparison to healthy controls. Sleep. 2009 Feb 1;32(2):175-80.

Résumé en anglais

STUDY OBJECTIVE: To examine whether cerebrospinal fluid (CSF) histamine contents are altered in human narcolepsy and whether these alterations are specific to hypocretin deficiency, as defined by low CSF hypocretin-1.

METHODS: Patients meeting the ICSD-2 criteria for narcolepsy with and without cataplexy and who had CSF hypocretin-1 results available were selected from the Stanford Narcolepsy Database on the basis of CSF availability and adequate age and sex matching across 3 groups: narcolepsy with low CSF hypocretin-1 (n=34, 100% with cataplexy), narcolepsy without low CSF hypocretin-1 (n=24, 75% with cataplexy), and normal controls (n=23). Low CSF hypocretin-1 was defined as CSF \leq 110 pg/mL (1/3 of mean control values). Six of 34 patients with low CSF hypocretin-1, six of 24 subjects with normal CSF hypocretin-1, and all controls were unmedicated at the time of CSF collection. CSF histamine was measured in all samples using a fluorometric HPLC system.

RESULTS: Mean CSF histamine levels were: 133.2 \pm 20.1 pg/mL in narcoleptic subjects with low CSF hypocretin-1, 233.3 \pm 46.5 pg/mL in patients with normal CSF hypocretin-1 (204.9 \pm 89.7 pg/mL if only patients without cataplexy are included), and 300.5 \pm 49.7 pg/mL in controls, reaching statistically significant differences between the 3 groups.

CONCLUSION: CSF histamine levels are reduced in human narcolepsy. The reduction of CSF histamine levels was more evident in the cases with low CSF hypocretin-1, and levels were intermediate in other narcolepsy cases. As histamine is a wake-promoting amine known to decrease during sleep, decreased histamine could either passively reflect or partially mediate daytime sleepiness in these pathologies.