



Letter to the Editor

Prevalence of nocturnal sleep onset rapid movement sleep period (SOREMP) in narcolepsy type 1 and type 2



Dear editor,

The Third Edition of International Classification of Sleep Disorders (ICSD-3) suggested that the nocturnal sleep onset rapid movement sleep period (SOREMP) obtained in a full night polysomnography (PSG) may substitute for one of the two SOREMPs required to meet MSLT criteria, and added the levels of hypocretin lower than <110 pg/mL as part of diagnostic criteria for narcolepsy type 1 and type 2 [1].

Emerging therapies focusing on hypocretin-1 “replacement” or immunotherapy to prevent the loss of hypocretin-1 neurons are warranted [2]. Nowadays, the hypocretin-1 level is the best option to identify candidates for new therapies. However, the hypocretin-1 level in CSF is not available in most health services [3].

On the other hand, identification of cataplexy and nocturnal SOREMP is not difficult. Questionnaires to identify cataplexy have been successfully used and nocturnal SOREMP can be easily identified [4]. Notably, no study compared the prevalence of nocturnal SOREMP between narcolepsy type 1 and type 2 so far [5].

We studied the prevalence of nocturnal SOREMP in narcolepsy type 1 compared with type 2 in 91 adult patients [34 (37.36%) men; age 35.2 ± 14.6 years] in regular follow-up for more than six months. Narcolepsy type 1 ($n = 60$) and type 2 ($n = 31$) patients were defined according to standard criteria [1].

There was no difference in age, sex, mean sleep onset latencies, hallucinations report, sleep paralysis, disruptive sleep, and/or automatic behavior when compared with narcolepsy type 1 and type 2 (Table 1). The narcolepsy type 1 patients had lower level

of CSF hypocretin-1 (24.36 ± 22.95 pg/mL vs 381.43 ± 136.82 ; $p = 0.0001$), higher number of SOREMP (3.53 ± 1.26 vs 2.67 ± 1.20 ; $p = 0.0001$), as well as greater prevalence of nocturnal SOREMP (18 vs 3; $p < 0.01$) and presence of cataplexy (56 vs zero; $p = 0.0001$).

This study described higher prevalence of nocturnal SOREMP in narcolepsy patients type 1.

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Conflict of interest

The authors report no conflict of interest.

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: <http://dx.doi.org/10.1016/j.sleep.2017.08.004>.

References

- [1] Medicine AaOs. Third edition of international classification of sleep disturbances 2014.
- [2] Barateau L, Lopez R, Dauvilliers Y. Treatment options for narcolepsy. *CNS Drugs* 2016;30:369–79.
- [3] Hirtz C, Vialaret J, Gabelle A, et al. From radioimmunoassay to mass spectrometry: a new method to quantify orexin-A (hypocretin-1) in cerebrospinal fluid. *Sci Rep* 2016;6:25162.
- [4] Baumann CR, Mignot E, Lammers GJ, et al. Challenges in diagnosing narcolepsy without cataplexy: a consensus statement. *Sleep* 2014;37:1035–42.
- [5] Cairns A, Bogan R. Underutilization of the MSLT in sleepy patients with a short onset REM period (SOREMP) in the sleep clinic. *Sleep Med* 2017;32:150–6.

Table 1

Demographic, clinical and laboratorial findings in narcolepsy patients type 1 and type 2.

	Narcolepsy type 1 (60)	Narcolepsy type 2 (31)	p
Age (years)	38.14 ± 14.50	35.06 ± 11.16	0.31
Gender (male)	20 (39.22%)	14 (35%)	0.42
HLA-DQB1*0602	51 (85%)	12 (39.7%)	0.0001
Hypocretin-1 (pg/mL)	24.36 ± 22.95	381.43 ± 136.82	0.0001
Mean sleep latency (minutes)	2.24 ± 1.10	2.81 ± 1.56	0.89
Numbers of SOREMP at MSLT	3.53 ± 1.26	2.67 ± 1.20	0.0001
Patients with nocturnal SOREMP	18 (35.29%)	3 (7.5%)	0.001
Cataplexy	56 (93.33%)	0 (0%)	0.0001
Hallucinations	39 (76.47%)	28 (70%)	0.32
Sleep paralysis	32 (62.75%)	24 (60%)	0.48
Disruptive sleep	40 (78.43%)	25 (62.5%)	0.76
Automatic behavior	21 (41.18%)	11 (27.5%)	0.12

SOREMP—sleep onset.

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