Mesial temporal lobe epilepsy: searching for minor motor events during sleep.

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OBJECTIVES

Minor motor events during sleep have been well characterized in Nocturnal Frontal Lobe Epilepsy (NFLE). In Temporal Lobe Epilepsy (TLE) stereotyped behaviours during sleep have been described. Moreover, it has been reported that sleep in TLE can be altered. The main objective of the study is to analyse the sleep of patients with symptomatic mesial TLE (MTLE) to test the presence of minor motor events. The secondary objective is to compare the sleep parameters of patients and controls.

MATERIALS AND METHODS

We performed a retrospective study analysing the nocturnal sleep of patients with symptomatic MTLE and healthy controls. Videopolysomnographic recordings of all the subjects were reviewed standardizing each motor event in a few distinctive patterns: hand-face movements, oroalimentary automatisms, limbs' dystonia, head rotation, pelvic movements, adjustment movements, gestural automatisms and others not defined movements (Figure 1). Statistical comparisons were performed setting as level of significance a p value < 0.05.

Figure 1: motor patterns during sleep; a) hand-face movements; b) oroalimentary automatisms; c) hands dystonia; d) head rotation; e) pelvic movements; f) adjustment movements; g) gestural automatisms; h) other movements.

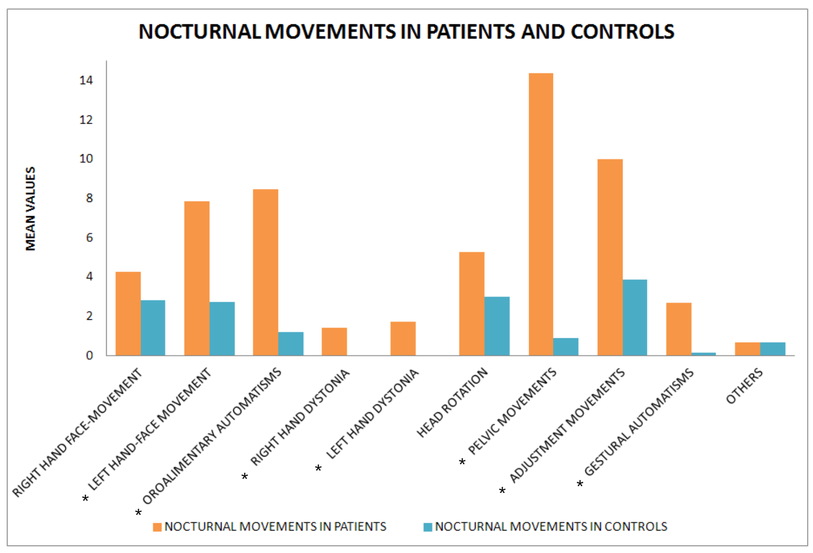
RESULTS

We analysed the nocturnal sleep of 15 patients with symptomatic MTLE and of 15 healthy controls (Table 1). The analysis of movements during nocturnal sleep revealed significant differences between groups (Table 2). Investigation of sleep macrostructure showed no significant differences (Table 3).

Table 1: Baseline characteristics of patients and controls

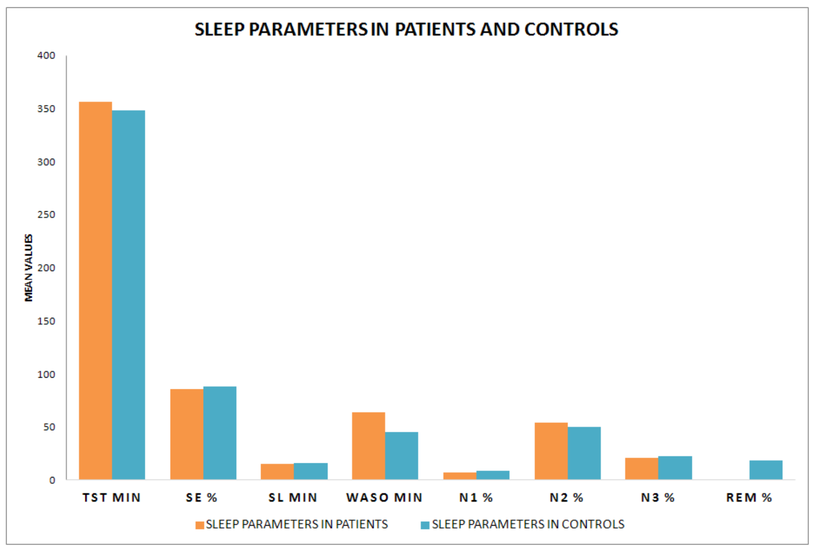
Variable	Patients, n = 15 N (%)	Controls, n = 15 N (%)	p value
Age (years) mean SD	31.8 14.9	32.8 11.2	0.57
Sex (M)	8 (53.3)	6 (40)	0.46
Familiar history of epilepsy	1 (6.6)	2 (13.3)	1
MRI alterations	15 (100)	3 (20)	0.0001*
Cognitive deficits	11 (73.3)	0	0.0001*

Table 2: Comparison of nocturnal movements in patients and controls



*p < 0.05

Table 3: Comparison of sleep parameters in patients and controls



TST, total sleep time; SE, sleep efficiency; WASO, wake after sleep onset; N1, phase 1 of NREM sleep; N2, phase 2 of NREM sleep, N3, phase 3 of NREM sleep, REM, REM phase of sleep.

CONCLUSIONS

The results of our study demonstrated the presence of minor motor events during sleep of patients with MTLE without a significant alteration of their nocturnal sleep macrostructural parameters.

References

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