

P-1352 - IMPROVEMENT OF THE LINK BETWEEN CARDIAC VAGAL INFLUENCE AND DELTA SLEEP IN SAHS BY LONG-TERM NCPAP TREATMENT

F.Jurysta, C.Kempenaers, J.-P.Lanquart, P.Linkowski

Sleep Laboratory, Department of Psychiatry, Erasmus Academic Hospital, Brussels, Belgium

Introduction: Numerous cardiovascular events are related to sleep apnea-hypopnea syndrome (SAHS). Several studies reported, in SAHS patients, increased cardiac sympathetic influence and altered link between cardiac vagal activity and delta sleep EEG. Nevertheless, short-term nasal CPAP (nCPAP) treatment regulates cardiac sympatho-vagal balance and sleep architecture.

Objectives: We tested that long-term nCPAP treatment improves the link between cardiac vagal influence and delta sleep EEG across the night.

Aims: Long-term nCPAP treatment could improve the link between heart rate variability (HRV) and sleep to prevent occurrence of cardiovascular events.

Methods: Cardiac activity and sleep of 8 middle-aged men suffering from SAHS were recorded before and after at least 6 months of nCPAP treatment. They were matched for sex, age, caffeine, nicotine and alcohol consumption with 14 healthy men. All subjects were free of somatic and psychiatric disorders as well as medication. Sleep architecture, spectral components of HRV and delta power band were calculated across the first three NREM-REM cycles as well as a coherence analysis between cardiac vagal influence and delta sleep EEG.

Results. AHI was 63.5 ± 22.9 vs 5.5 ± 4.4 events/hour after 47 ± 34 months of nCPAP treatment (mean \pm standard deviation). Awake, NREM and REM sleep durations were similar between groups as well as spectral HRV components. Coherence analysis revealed decreased gain value for untreated patients in comparison to controls while difference disappeared with nCPAP treatment.

Conclusions: Long-term nCPAP treatment improves the link between cardiac vagal influence and delta sleep even in the absence of altered HRV.