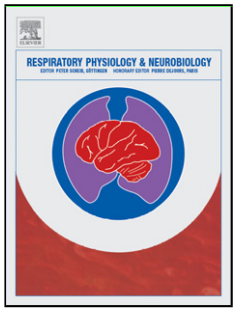

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Effect of CPAP on Sleep Spindles In Patients with OSA

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Highlights

- We observed increased spindles number under CPAP treatment in OSA patients.
- Increased spindles may be played a regulatory effect on sleep apnea symptoms
- OSA patients must be encouraged to adhere CPAP devices for avoiding complications of this disorder.

Abstract

Objective: Consequences of OSAS include excessive daytime sleepiness, divided sleep architecture, impaired neurocognitive performance, and significant psychosocial disruption. In this study we aimed to evaluate sleep spindles changes before and after PAP treatment in patient with OSA.

Methods: Seventy-three consecutive patients (M/F:61/12) who applied to Sleep Disorders Center of Inonu University Hospital and met the inclusion criteria were enrolled to this study. Full-night polysomnography and CPAP titration were performed .

Results: Mean AHI were detected as 43,8±24,4 and mean oxygen saturation was 79% in patients under full-night PSG. Singificant increasing were observed on spindle count under CPAP titration (192 ± 98.vs 347 ± 165 per hour $p<0.001$)) and also significant increasing was recorded on oxygen saturation (79±15 vs 94±4 % $p<0.001$).

Conclusion: Both spindle count and oxygen saturation were recorded to be significantly increased under CPAP titration while there was a significant decrease in apnea-hypopnea. We have shown that significant increase in number of spindles can be achieved with CPAP treatment, those to be decreased in patient with OSA. Number of spindles may play a role as an indicator of better outcome in OSA patients.

Keywords: Sleep apnea; ; ; ; ; , obstructive sleep apnea, sleep spindle, neurocognitive impairment, CPAP, intermittent hypoxia