

IS ADHERENCE TO PAP TREATMENT FOR APNEA ASSOCIATED WITH IMPROVED INSOMNIA-RELATED SYMPTOMS?

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Introduction: Poor sleep quality and difficulties with daytime functioning, frequently characterized as symptoms of insomnia, are common among patients with obstructive sleep apnea (OSA). The goal of this investigation was to explore changes in sleep quality and daytime functioning in PAP adherent and nonadherent primary care patients diagnosed with OSA.

Methods: Participants (mean age = 56, SD = 11.66, range 23-83) recruited from family practice clinics completed the Sleep Questionnaire (Libman et al., 2000) at Time 1 and shortly thereafter underwent polysomnography. Here we present data for those 44 individuals diagnosed with OSA who were either adherent (n= 20, 13 female, 7 male) or nonadherent (n=24, 15 female, 9 male) to prescribed PAP treatment, according to self-report 1-1/2 years after diagnosis (Time 2). Traditional adherence criteria were used. Adherence data determined by the PAP machine chip were available for 20 participants. Adherence results for self-report and chip are consistent: Pearson correlations show high and significant correlations for mean weekly number of hours of PAP use, $r(18)=.713$, $p<.01$, and for mean weekly percentage of days of PAP use, $r(18)=.801$, $p<.01$.

Results: A series of 2 Groups (Adherent/Nonadherent) x 2 Time (Time 1/Time 2) ANOVAs were conducted on night-time and daytime functioning items on the Sleep Questionnaire. Significant interactions of Group x Time were found on the following: distress related to difficulty initiating and/or maintaining sleep, non-refreshing sleep, sleep quality, sleep satisfaction, daytime sleepiness, and difficulty concentrating. Overall, scores for adherent participants were slightly, but not significantly, worse than those of nonadherent participants at Time 1. Scores for nonadherent participants generally did not change over time, while those of adherent participants improved and were significantly better than those of nonadherent participants at Time 2.

Conclusions:

- PAP-adherent individuals had worse scores on a range of symptoms at Time 1 than nonadherent individuals, but the differences were not significant.
- PAP-adherent individuals improved by Time 2; in many cases their symptoms improved significantly relative to nonadherent individuals.
- The symptoms of nonadherent individuals did not improve from Time 1 to Time 2.

In summary, the findings show that compared to their nonadherent counterparts, at Time 2 PAP-adherent individuals were less distressed about initiating and/or maintaining sleep, experienced less non-refreshing sleep, reported better sleep quality, experienced greater satisfaction with their sleep, felt less sleepy during the day, and had less trouble concentrating during the day.

PAP treatment, which targets obstructive sleep apnea, appears to improve symptoms that are similar to those of insomnia - i.e. nocturnal sleep quality and daytime quality of life,

References: Libman, E., Fichten, C. S., Bailes, S., & Amsel, R. (2000). Sleep questionnaire vs. sleep diary: Which measure is better? *International Journal of Rehabilitation and Health*, 5, 205-209.