

Title: Ambulatory management of obstructive sleep apnea syndrome improves alertness and quality of life.

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Introduction:

The efficacy of ambulatory management of obstructive sleep apnea to improve the patient's quality of life, QOL, is unclear. We evaluated alertness, QOL, and CPAP therapy compliance using an ambulatory care model.

Methods:

A prospective longitudinal study with-in subjects design. Convenience sampling was used. Patients completed initial screening questionnaire to document subjective symptoms and an Epworth Sleepiness Scale (ESS). Baseline alertness was assessed by Psychomotor Vigilance Task (PVT), and QOL measures using the SF-36. Ambulatory polysomnography was undertaken with a portable device to obtain recordings of airflow, breathing effort, oxygen saturation, snoring, pulse rate, and body position. Patients found to have OSA then underwent an unattended CPAP titration using an auto-titrating CPAP device. After 30 days of treatment, the questionnaires and PVT were repeated. Statistical analyses were performed and statistical significance was defined as 2-tail alpha value of 0.05. Primary outcomes measured were CPAP use and PVT scores. Subjective measures included perception of treatment efficacy (6-point Likert scale), sleepiness by ESS scores, and QOL by SF-36.

Results:

Fourteen male subjects, age 37-75 years (mean 48.57, S.D. 9.83) completed the study. Apnea Hypopnea Index before treatment was 44.62 events per hour (S.D. 24.13). Quality of life as measured by SF-36 improved significantly for physical health, general health, vitality, social functioning, emotional and mental health subscales. Physical function trended towards improvement. Epworth scores improved from 13.21 (S.D.4.08) to 5.57 (S.D. 3.78) after treatment. Compliance was available for 8 subjects with mean use of 4.04 hours nightly (range 0 – 7.45 hrs). PVT (pretreatment mean = 351.05, S.D. 175.94; posttreatment mean= 304.58, S.D. 102.53) showed a trend towards improvement.

Conclusion:

In selected patients, ambulatory management of obstructive sleep apnea improved the patient's QOL. These improvements are comparable to previously published results using traditional in-laboratory management.

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