

CPAP: 88 ± 10 mmHg; CON 82 ± 13 mmHg). BRS was lower in OSA_un and CPAP, relative to CON ($p < 0.05$; OSA_un: 13.1 ± 7.6 ms/mmHg; CPAP: 13.7 ± 9.0 ms/mmHg; control 18.3 ± 11.9 ms/mmHg). Other cardiovascular measures of BPV, HR and HRV in addition to BP showed significant increases in response to HG, but these changes were similar in all 3 groups.

Conclusion: BRS during HG was reduced in both OSA_un and CPAP compared to CON, while HG evoked similar overall changes in BP and HR in all three groups. Although CPAP reduces sympathetic tone measured as Muscle Sympathetic Nerve Activity (MSNA), BRS appears to be unaffected by the intervention. Irreversible changes in the baroreflex network may occur with OSA that are not altered with CPAP usage.

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WHAT ARE PATIENT CHARACTERISTICS, NURSING INTERVENTIONS AND PATIENT OUTCOMES FOR PATIENTS WITH DIFFICULTY ADAPTING TO CPAP?

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Introduction: A sleep nurse clinician was added to our care team to provide situationally responsive educational, behavioral and troubleshooting interventions and case management to patients identified as high risk for untreated SDB. The objective of this study was to describe the patient characteristics, nursing interventions, and impact on CPAP usage among patients referred to the nurse-clinician.

Methods: Descriptive exploratory retrospective chart review was used to identify patient characteristics for all new patients referred; in-depth extraction was conducted for patients who had home CPAP for ≥ 1 month and experienced difficulty using CPAP. We examined: issues using CPAP, frequency and types of nursing contacts, nursing interventions and CPAP usage. Patient characteristics of those with difficulty adapting to CPAP were compared to those referred for assistance to obtain CPAP. Change in objective CPAP usage before vs after sleep nurse case management was determined when possible.

Results: 403 patients were referred, with mean (SD) age: 54.8 y (15.7), 56.1% men, RDI: 45.4 (31.4), 42.4% employed, 16.6% retired, 25% with ≥ 3 co-morbidities plus SDB. Difficulty adapting group ($n = 204$) had more women ($p = 0.033$), more employed ($p = 0.03$), and more insomnia ($p = 0.001$). CPAP issues included: mask (18%), ENT (14%), constraining beliefs (14%), access to treatment (12%), pressure intolerance (11%), comorbidities (11%), suboptimal usage (7%), insomnia (7%). Nursing contact: 74% subjects had ≤ 4 contacts (range: 1–16), 53% in-person, 25% telephone calls, 22% other. Nursing interventions were: educational (33%), troubleshooting (30%), behavioural (20%), liaison/coordination of care (13%), promoting self-management skills (3%). Preliminary mean CPAP usage ($n = 18$) improved by 40.0 (112.3) min and by 7.4 (31) % of nights used ≥ 4 hrs ($p = \text{NS}$; data extraction ongoing).

Conclusion: Demographic data identified women and insomnia to be significant characteristics in the difficulty adapting group. This model of care identified 2 types of interventions not previously recognized in typical interventions to promote CPAP adaptation: Liaison/coordination of care and promoting self-management skills. Some patients were able to increase their CPAP usage.

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OUTCOME OF SLEEP-WAKE PATTERN IN OBSTRUCTIVE SLEEP APNEA PATIENTS AFTER POSITIVE AIRWAY PRESSURE THERAPY USING ACTIGRAPHY.

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Introduction: The initial phase of continuous positive airway pressure (CPAP) therapy in patients with obstructive sleep apnea (OSA) may affect sleep parameters and PAP compliance. Actigraphy is a validated method using accelerometer to objectively measure sleep parameters in patients with a range of sleep disorders, including OSA, particularly to follow-up after treatment. We compare sleep parameters from actigraphy, sleep log, sleep diary, Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI), heart rate and blood pressure in OSA patients before and after CPAP therapy for 1 week.

Methods: This pilot study have been prospectively performed at Central Chest Institute of Thailand (CCIT) since June to November 2020. Adult OSA patients, diagnosed by ICSD-3 criteria and achieved optimal or good CPAP pressure titration from split-night polysomnography (PSG), were informed and consent to wear actigraphy before and after CPAP therapy each for 1 week. Clinical and sleep parameters were recorded and analyzed using Wilcoxon matched-pair signed-rank and Mann Whitney U test. P -value < 0.05 was considered to have statistical significance.

Results: All 11 OSA patients participated in this study. Most patients were male (63.6%), hypertension (54.5%) and dyslipidemia (45.4%). Means of age, body mass index (BMI), ESS, PSQI, apnea hypopnea index (AHI), nadir SpO₂, and CPAP usage were 45.5 ± 15.9 years, 29.1 ± 5.2 kg/m², 10.8 ± 3.9 , 7.7 ± 2.9 , 65.2 ± 37.7 events/h, 82.3 ± 10.8 % and 9.5 ± 3.1 cmH₂O, respectively. Comparing before and after 1-week CPAP therapy, an average number of wake bouts (NWB), 48.4 vs 38 events, $p = 0.010$, ESS (11 vs 9, $p = 0.035$) and PSQI (8 vs 4, $p = 0.005$) were significantly decrease. Additionally, when comparing between poor and good CPAP compliance group, NWB (55.1 vs 36.3 events, $p = 0.036$) and the difference of wake after sleep onset (WASO), 10.5 vs -0.11 min, $p = 0.035$) were significantly decrease.

Conclusion: OSA patients treated with CPAP for 1-week experienced marked improvement in sleepiness, sleep quality and nighttime awakening.

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OUTCOME OF POSITIVE AIRWAY PRESSURE THERAPY COMBINED WITH TELEMONITORING IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME.

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