

Clinical Efficacy of a Nasal Expiratory Positive Airway Pressure (EPAP) Device for the Treatment of Obstructive Sleep Apnea (OSA)

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Introduction

Provent® Sleep Apnea Therapy (Ventus Medical, Inc.) is a novel and effective nasal EPAP treatment for patients with OSA. It is well tolerated, easy to use and less cumbersome than traditional therapies.

Methods

Eligible patients in this community based sample were treatment naïve, or they had tried and failed CPAP. A total of 123 patients were offered nasal EPAP. Polysomnography was recommended if patients intended to use nasal EPAP as primary treatment, OSA severity was moderate to severe, or OSA severity was mild and accompanied by medical co-morbidities.

Results

Of the 123 patients offered nasal EPAP, 64% were CPAP failures and 32% were treatment naïve. There were no differences in age (51 ± 10), gender (72% men) or BMI (32 ± 6) between the entire sample and those patients with PSG data.

Follow-up is pending for 53 patients. In the analysis group of the remaining 70 patients, 41 (59%) accepted the therapy after initial trial. Eleven are continuing with EPAP therapy based on physician evaluation and subjective symptom relief. Polysomnographic data were available for 30 patients. Treatment success was defined as a reduction in Apnea Hypopnea Index (AHI) of $\geq 50\%$ or an AHI < 10 . Twenty four patients (80%) were effectively treated using this definition. The median AHI was reduced from 17.1 to 4.9 ($p < 0.001$). The median oxygen desaturation index (ODI) was decreased from 18.8 to 4.4 ($p = 0.073$). There was a trend toward lower mean Epworth scores [7.2 to 5.5 ($p = 0.072$)].

Conclusion

Nasal EPAP is an effective and well tolerated treatment option for patients with mild to moderate OSA or for patients who cannot tolerate CPAP.

Provent® Sleep Apnea Therapy



Actual Size

Support

This was an investigator-initiated study funded by Ventus Medical, Inc.

Figure 1. **AHI**
Median AHI (n=30)

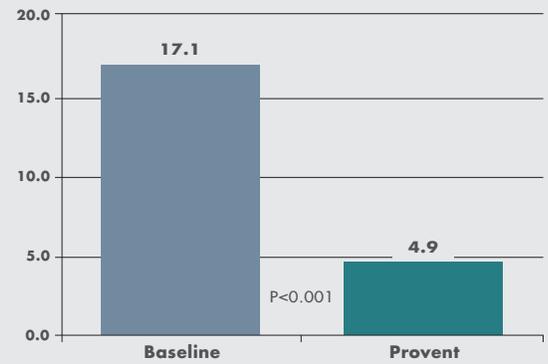
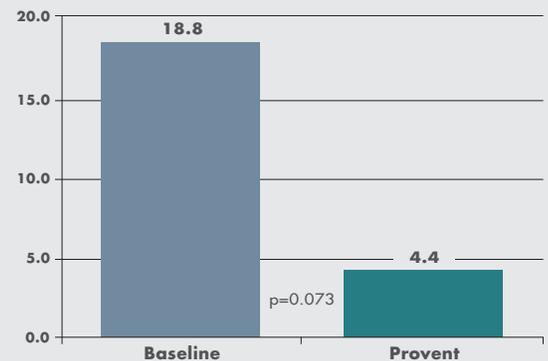
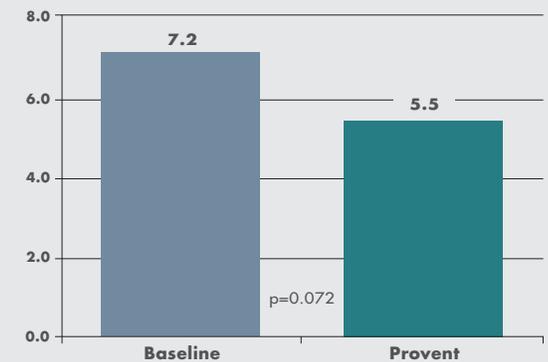


Figure 2. **ODI**
Median ODI (n=16*)



* Only includes patients with paired data on this outcome.

Figure 3. **ESS**
Average ESS (n=21*)



* Only includes patients with paired data on this outcome.