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Comparing Treatment Efficacy of Upper Airway Stimulation to CPAP for Obstructive Sleep Apnea

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Abstract

Introduction

Upper airway stimulation (UAS) is newer treatment option for the management of Obstructive Sleep Apnea (OSA) and presents an alternative to the traditional Continuous Positive Airway Pressure (CPAP). Previously published data has shown good control of disease severity utilizing UAS with high patient tolerance and compliance. We aim to compare a cohort of patients treated with UAS and CPAP and evaluate therapy usage and disease control through use of the mean disease alleviation concept.

Methods

We evaluated demographic, pre and post-treatment sleep study, and therapy utilization data of cohorts of patients with OSA treated with CPAP and UAS. We compared the two groups and used the mean disease alleviation (MDA) concept to assess overall control of disease.

Results

We included 101 patients undergoing UAS therapy and postoperative PSG. We compared this group to a cohort of 149 patients diagnosed with moderate-severe OSA and treated with CPAP who were undergoing sleep study in our lab. We found the UAS group to be significantly older, with more severe disease, and a lower BMI. Utilizing the MDA concept, we found the UAS group to have a significantly higher utilization of therapy and disease alleviation with lower residual Apnea-Hypopnea Index (AHI)

Conclusion

UAS is an alternative treatment option to CPAP which is well tolerated by patients and offers good disease control.