Evaluating the efficacy of the MicrO$_2$ mandibular repositioning device for the treatment of obstructive sleep apnea

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Obstructive Sleep Apnea (OSA) is a rapidly emerging public health concern that enables dentists to expand the scope of their services. This single-center study offers a first look at the clinical efficacy of the new MicrO$_2$ Sleep Apnea Device.

BACKGROUND

The American Academy of Dental Sleep Medicine notes that over 18 million Americans have sleep apnea.[1] The long-term effects of sleep loss and sleep disorders have been associated with increased risk of hypertension, diabetes, obesity, depression, heart attack, and stroke.

Medical and dental professionals are becoming increasingly aware of the complexity, difficulty, and seriousness of treating sleep issues, making the concurrent use of gold standard treatments (CPAP, BIPAP, APAP, ASV) and dental mandibular repositioning devices (MRD's) a viable and often prudent treatment approach.

STUDY DESIGN

The goal of this study was to evaluate the clinical efficacy of the new MicrO$_2$ Mandibular Repositioning Device (MicroDental Laboratories, Dublin, CA). For this study, clinical efficacy is defined according to three success thresholds that are commonly utilized in the field of dental sleep medicine.[2] The first success threshold is a post treatment AHI score of less than 5. The second is a post treatment AHI score of less than 10. The third is a post treatment AHI score improvement (reduction) of 50% or better, if not exhibiting an AHI score below 10.

This single-center study is comprised of either patients recently diagnosed with obstructive sleep apnea or existing patients who required a new MRD. Each patient was treated with the MicrO$_2$ Sleep Apnea Device.

STUDY RESULTS

For the six participants who completed the protocol at the time of authoring this report, 100% achieved at least one of the three success thresholds.

CONCLUSION

The findings of this single-center study of six participants confirm that the new MicrO$_2$ MRD is a viable option for treating patients who are diagnosed with obstructive sleep apnea. Further research is required to evaluate the potential incremental clinical benefits of this new MRD with respect to patient compliance, treatment efficiency, and mitigation of MRD side effects.

ADDITIONAL INFORMATION

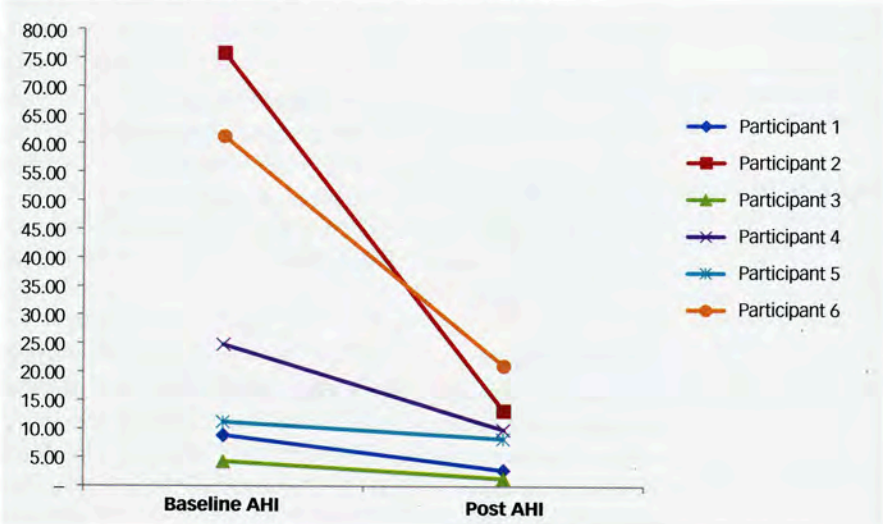
The Las Vegas Institute, The American Academy of Dental Sleep Medicine, and The Pankey Institute are amongst the leading providers of continuing education courses on the practice of dental sleep medicine. For more information, contact these institutions and organizations, or contact MicroDental Laboratories.

REFERENCES

1 www.AADSM.org

2 Ferguson KA; Cartwright R; Rogers R et al. Oral Appliances for Snoring and Obstructive Sleep Apnea: A Review. *SLEEP* 2006;29(2): 244-262.

MicrO$_2$MRD Therapy Pre-Post AHI Score Analysis, by Participant



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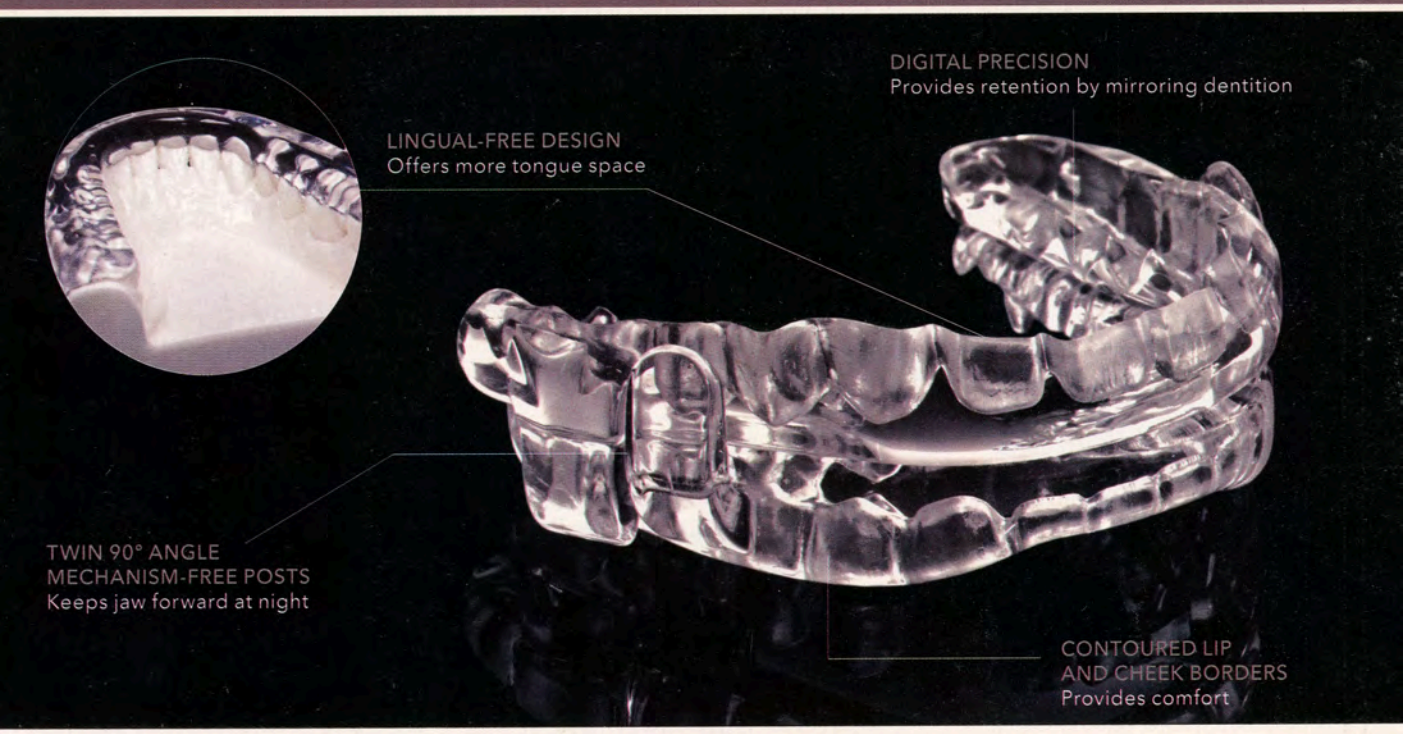

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