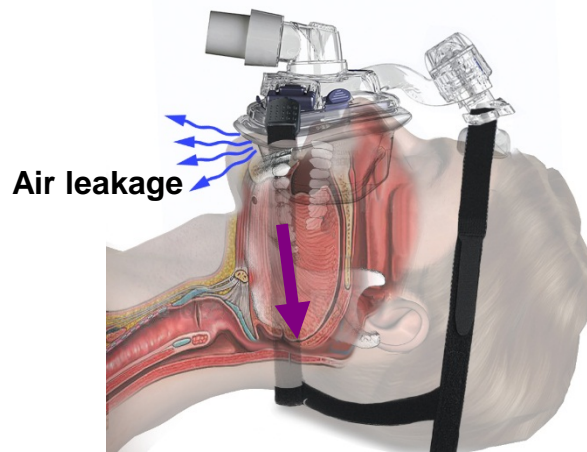
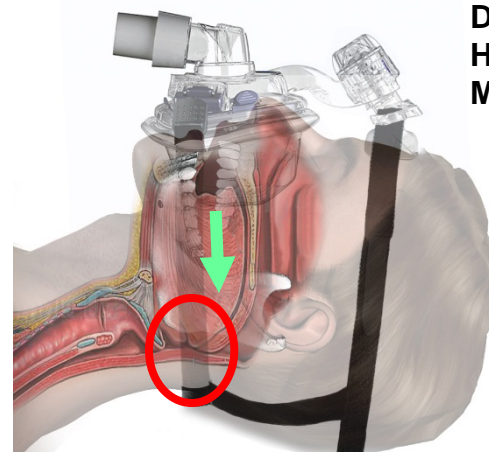


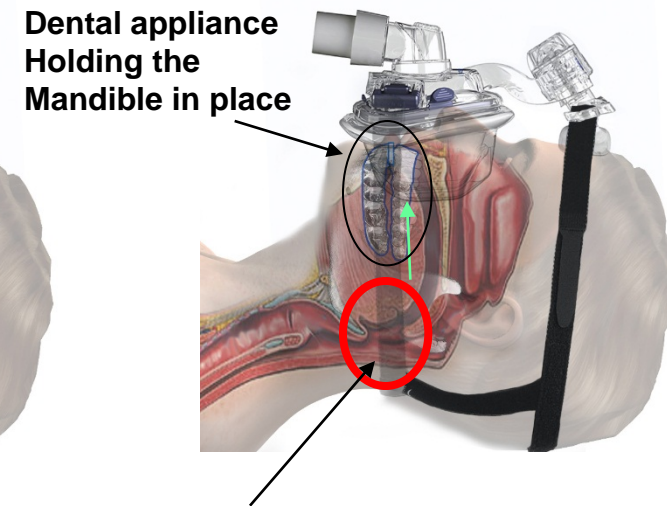
Improved Outcome of Full Face Mask CPAP Treatment with Mandibular Stabilization using a Dental Appliance



Mandibular relaxation during sleep resulting in leakage



Tightening of the straps to resolve leakage around the mouth and chin resulting in enhancement of airway obstruction.



Enhanced airway potency by mandibular stabilization from a dental appliance that allows for a more stable Full Face mask placement.

Diagram from APSS poster presentation: Simmons, JH; Improved outcome of Full Face mask CPAP treatment with mandibular stabilization using a dental appliance, SLEEP, Vol 33, Supp 2010 p A162

0478

IMPROVED OUTCOME OF FULL FACE MASK CPAP TREATMENT WITH MANDIBULAR STABILIZATION USING A DENTAL APPLIANCE

Simmons JH

¹Sadler Clinic Sleep Disorders Center, The Woodlands, TX, United States, ²Comprehensive Sleep Medicine Associates, Houston, TX, United States

Introduction: OSA patients encountering difficulties with nasal CPAP masks are frequently transitioned into Full Face masks (FFM). Unfortunately failure with FFM can frequently occur. Clinical experience has demonstrated that one of the pitfalls of FFM therapy results from displacement of the mandible by tightening the lower mask straps. Typically the straps are tightened to overcome leakage from the chin region of the FFM when the mandible relaxes. Tightening the straps enhances the patients obstruction in the back of the throat. To overcome FFM failures mandibular advancing dental appliances, such as the TAP, have been utilized to stabilize the mandible and provide a better anchor against the FFM cushion. This approach has worked well over the past several years. This study is an attempt to provide a statistical analysis of this approach to show clinical benefit in FFM failure patients.

Methods: Ten consecutive patients meeting the profile of 1) failing treatment with a Full Face mask 2) having intact teeth allowing utilization of a dental appliance and 3) who on examination with the FFM and machine on, a recognized improvement of mask fit was obtained by the examiner while the patient was supine, protruding the mandible slightly forward or keeping the mandible in a stable end on end relationship of the bite. A boil and bite dental appliance (SnoreFree) was made and fitted in conjunction with their FFM for optimal fit to resolve leakage. A six question questionnaire was taken before and after a treatment period with the combined FFM / Dental Appliance therapy.

Results: Of the ten patients, nine completed the study. One patient dropped out of the study because of pain from the appliance. Subsequent assessment revealed chronic nasal obstruction in that patient requiring mouth breathing into the mask. All remaining 9 patients demonstrated statistical improvement on the 6 question survey. Analysis of variance was significant with a $P < 0.001$

Conclusion: It is clear from clinical experience that FFM failures frequently occur from mandibular movement. This study supports clinical experience that mandibular stabilization can improve the performance of FFM CPAP treatment. However, this combined method is not applicable to all patients and particularly those with nasal obstruction, requiring oral breathing, a dental appliance seems contraindicated.

Support (If Any): SnoreFree appliances were provided by the SMILE Foundation and the APPLIANCE THERAPY GROUP, Chatsworth California