



Case Report

Removable Mandibular Repositioning Appliance RMRA in a Maxillary Edentulous Patient

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Clinically effective treatment of primary snoring and mild to moderate cases of obstructive sleep apnea (OSA) can be a challenge to the health care professional. Although nasal CPAP is therapeutically effective, especially for severe OSA, its compliance rates in mild to moderate OSA patients may not exceed 58% - 78%. Edentulous patients may be more vulnerable to factors that decrease CPAP compliance.

Among other physical therapeutic alternatives also employed simultaneously with behavioral measures (weight loss, position training) is the use of removable intraoral appliances. Our need to treat a primary snoring maxillary edentulous patient has taken us to develop a modified removable mandibular repositioning appliance (RMRA) usually used by bimaxillary dentulous patients.

The authors report herein a case of a primary snoring maxillary edentulous patient treated with a modified RMRA with its maxillary base fitted over the residual ridge as well as in a conventional denture, worn during sleep and developed by one of the authors (Barbosa) based on literature³.

METHOD

TJS, a 58-year old male (BMI = 26.64) was found to be maxillary edentulous and mandibular dentulous. *PSG data*: Apnea-Hypopnea Index - AHI = 5.8. The patient was fitted with a modified RMRA, a single rigid piece made with thermoplastic acrylic resin and metallic clasps (Adam's clasps) for mandibular retention.

RESULTS

Snoring was abolished with the RMRA but a discomfort on the residual ridge led to discontinuation of use after 4 weeks. The rigid acrylic maxillary

base was relined with a soft liner, decreasing the discomfort and the patient resumed wearing the device. No PSG data was obtained with the RMRA in place to date.

DISCUSSION

Maxillary edentulous patients have skeletal cephalometric changes that are also found in OSA patients, giving the idea that these individuals (maxillary edentulous) are more prone to develop OSA⁴. The difficulties experienced by maxillary edentulous patients while attempting to adapt to nasal CPAP are twofold: 1) Physical pressure caused by the mask on denture buccal flange; 2) Air flow-induced denture dislodgement. Both provoke physical discomfort. The availability of a removable intraoral appliance may be a potentially useful therapeutic alternative for these patients².

References

1. Krieger J. Long-term compliance with nasal continuous positive airway pressure (CPAP) in obstructive sleep apnea patients and nonapneic snorers. *Sleep* 1992; 15:S42-S46.

2. Myer Jr. JB and Knudson RC. Fabrication

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