

Dr. James E. Metz

Featured Sleep Literature Article

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On behalf of Dr. James E. Metz and The Metz Sleep Center, I regularly review literature for pertinent information pertaining to sleep-disordered breathing. As relevant information is found, we would like to share it you! We hope this information will be helpful in your daily practice.

Sincerely, Dr. Mickey Harrison

Here are a few current articles concerning the positional component of OSA. As we treat our patients with oral appliance therapy, weight reduction, and lifestyle changes, an important component of sleep hygiene is to get the patient OFF OF THEIR BACK at night!

1) Morbidity and mortality risk ratios are elevated in supine dominant OSA: a long-term follow-up study

Kulkas A, Muraja-Murro A, et al,
Sleep Breath, 19:653-660, 2015.

Abstract

Purpose: Obstructive sleep apnea (OSA) is a common public health problem. Sleeping position dependency has been related to OSA, and around half of OSA patients suffer from positional OSA where majority of the respiratory events occur in supine position. The consequences of supine dominant OSA have not been thoroughly investigated in long-term follow-up studies. The aim of the study was to retrospectively investigate the effects of supine dominant OSA on morbidity and mortality risk ratios during long-term follow-up and compare the findings with a non-supine OSA group at different OSA severities.

Methods: Ambulatory polygraphic recordings of 793 patients with median follow-up time of 194.5 months were retrospectively analyzed. The risk ratios of morbidity and mortality of supine dominant OSA and non-supine OSA patients were compared.

Results: Supine dominant OSA patients, having majority of the obstruction events occurring in supine position, showed higher mortality and morbidity risk ratios in severe OSA category than the non-supine OSA patients. In severe category, the observed risk ratios were statistically significant.

Conclusions: The increased risk ratios of mortality and morbidity found further emphasizes that supine OSA might have more severe health consequences than non-positional OSA especially in severe OSA. ***Severe OSA occurring in supine position was shown to be more deleterious than non-supine OSA based on long-term mortality and morbidity evidence.***

2) A promising concept of combination therapy for positional obstructive sleep apnea

Dieltjens M, Vroegop AV, et al,
Sleep Breath, 19:637-644, 2015.

Abstract

Purpose: The objective of this randomized controlled trial was to assess the additional effect of a chest-worn sleep position trainer (SPT) in patients with residual supine-dependent obstructive sleep apnea (sdOSA) under mandibular advancement device (MAD) therapy.

Methods: Baseline and follow-up polysomnography with MAD were performed. Twenty patients with sdOSA under MAD therapy underwent two consecutive randomized polysomnographies: one with SPT and one with combination of SPT + MAD. Data are presented as median (quartile 1, quartile 3).

Results: The SPT reduced the time spent in supine sleeping position compared to baseline and MAD therapy. Both MAD and SPT were individually effective in reducing the overall apnea/hypopnea index (AHI) significantly when compared to baseline from 20.8 (15.1; 33.6)/h at baseline to 11.0 (6.7; 13.8)/h and to 11.1 (3.5; 17.7)/h with MAD or SPT, respectively. The combination of SPT + MAD further reduced the overall AHI to 5.7 (3.6; 7.4), which was significantly lower than with MAD alone ($p<0.001$) and SPT alone ($p<0.008$), respectively.

Conclusions: *The results of this study indicate that combination of SPT + MAD leads to a higher therapeutic efficacy in patients with sdOSA under MAD therapy when compared to one of the treatment modalities alone.*