Positional Therapy Is Worth a Try in Patients with Mild Obstructive Sleep Apnea

Point-Counterpoint: Is Avoidance of Supine Sleep an Adequate Treatment for OSA?

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Sleep apnea patients often report that they sleep better on the couch than in bed. While some of this improvement in sleep quality may result from the absence of an awakening elbow from a frustrated bed partner, it has seemed reasonable to assume that supine sleep is less common on the sofa. The prevalence of supine position-dependent sleep apnea in the general population is unknown, but it is demonstrable in about half of patients suspected of having sleep-disordered breathing referred for a sleep study.^{1,2} This proportion is even higher in Asian patients.³⁻⁵ Compared to patients without position dependence, these patients tend to be less obese, younger, with better sleep quality and less daytime sleepiness.⁶ It has been argued that since most obstructive sleep apnea (OSA) patients have mild to moderate severity and since position dependence is most prevalent in these categories, the great majority of patients with sleep-disordered breathing demonstrate this phenotype.⁷ It is then surprising that treatments, including positional therapy (PT), which are specifically focused on this population have received relatively little attention. This issue of *JCSM* includes two papers which describe use of PT. In one of these investigations,⁸ there was little difference between commercially manufactured devices and less elaborate devices (the “tennis ball technique”). Short-term compliance was satisfactory, although long-term use was described as disappointing. Of note, the rate of discontinuation was lowest in patients with mild severity. The second study⁹ described improved short-term efficacy of a sleep position trainer compared to the tennis ball technique. In both studies, use of PT was effective in decreasing the amount of supine sleep and resulted in decreased measures of OSA severity.

Neither of these studies compared the effectiveness of PT to continuous positive airway pressure (CPAP). A recent systematic review¹⁰ found only three studies of satisfactory quality comparing PT with CPAP.¹¹⁻¹³ Meta-analysis concluded that CPAP was more effective reducing the apnea-hypopnea index (AHI) and increasing oxyhemoglobin saturation, although the differences were relatively small. The advantage of CPAP was even lower in patients with mild sleep apnea. It is important to emphasize that the definition of position dependence varies among studies. CPAP is generally titrated to an effective level, whereas PT is simply begun. This may make the comparison inherently biased. If sleep in the non-supine position does not result in the absence of pathologic events (i.e., an AHI < 5

events/h), PT will not be as effective as CPAP.⁷ Patients with mild positional OSA have been shown to have the lowest cardiovascular comorbidities.¹⁴ PT should not be recommended for patients who have many events in lateral positions as well as supine. CPAP acceptance is often problematic in patients with mild OSA, particularly in the absence of perceptible daytime sleepiness.¹⁵ Therefore, it is reasonable to recommend PT rather than CPAP as initial treatment to patients with mild positional OSA without complaints of excessive sleepiness. The usefulness of PT in patients who refuse or fail to adhere to CPAP is probably minimal.

Unfortunately, an increasingly higher proportion of patients with suspected sleep apnea are referred for in-home sleep testing which may not include a monitor of body position. Consequently, identification of patients with positional OSA is difficult, if not impossible. In patients with mild OSA, it is worth considering performing a follow-up sleep study using PT to demonstrate effectiveness in a particular individual. If PT is shown to be effective, it would be appropriate to emphasize the importance of avoiding supine sleep to the patient utilizing one of the variety of devices described in the literature.¹⁶ If PT is not effective, it would be necessary to proceed to some sort of titration of positive airway pressure.

In the final analysis, it comes down to a choice of selecting the most appropriate, cost-effective means of treatment for the unique needs of individual patients rather than subjecting all patients to an uncomfortable and relatively expensive CPAP device, which they often will not use. Additional studies incorporating this holistic approach, incorporating PT, are warranted.

See the papers in this issue on positional therapy on pages 131 and 139.

CITATION

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