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Apnea in the Nonobese

A Need for Awareness

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To the Editor:
The review of the relationship of obesity and OSA by Dr Joosten et al[1] in *CHEST* (July 2017) is a welcome presentation of complex data from multiple sources. The authors should be justly proud of their work.

The question most often asked by patients is, "Why do I have sleep apnea?" Many have decided it is because of their weight; others know they could never have OSA because they are thin. In my patient population, weight is commonly thought to be the source of all OSA.

Dr Joosten's review points out that after weight loss, achieving an apnea-hypopnea index (AHI) < 5 occurs in a minority of patients (5% to 30%). Persistent apnea with an AHI > 5 is observed in 70% to 95% of previously obese patients.[1]

While most physicians would agree that not all patients with AHI between 5 and 15 need treatment, they would also agree that those patients have a degree of OSA, that the patients should be aware of the condition, and that there is a need for periodic reassessment. By commonly accepted definitions, those patients have residual apnea.

In my report of the relationship of weight and apnea from a community sleep practice, patients initially diagnosed with OSA were obese (BMI > 29) only 59% of the time. A full 41% were not obese at the time of diagnosis. The severity of OSA based on the AHI was related directly to weight. But, severe OSA was seen in thin individuals and mild apnea in very obese individuals.[2]

Reported weight loss success rates can be applied to that population to show the impact of weight loss on the number of patients who have apnea. The percentage of patients who will have persistent OSA after weight loss (apnea resulting from other factors) can be estimated by subtracting the percentage of obese patients who could potentially achieve apnea resolution (AHI < 5) from the percentage of obese patients we

observed. Figure 1 shows the application of estimated weight loss success rates when applied to that population. Persistent OSA would be observed in 82.3% to 94.1% of patients we diagnosed if all obese patients were able to become nonobese.

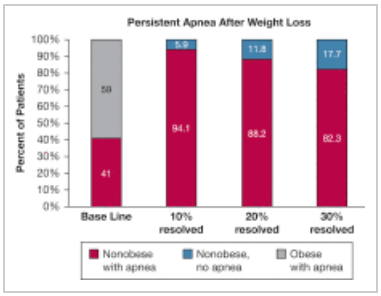

Figure 1

The projected percentage of patients with newly diagnosed apnea who will have persistent apnea (AHI > 5) after weight loss. The baseline represents the observed obesity rate in 450 patients with newly diagnosed apnea. The projections assume that all obese patients lost weight and became nonobese. The projected success rates are for an AHI < 5 and represent reported values of 10% to 30% success.

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OSA and obesity are serious medical conditions. They should be viewed as separate chronic conditions that adversely affect health. They are intertwined. Both are mutually aggravating, and each complicates the care of the other. Each requires independent long-term attention and care.

References

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2. Hooper, R.G. **The relation between sleep and weight in a suburban sleep center: observations and speculations on apnea and weight.** *Nat Sci Sleep.* 2016; 8: 315–320

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