

## December 2011 Pulmonary/Sleep Journal Club

Cano-Pumarega I, Durán-Cantolla J, Aizpuru F, Miranda-Serrano E, Rubio R, Martínez-Null C, de Miguel J, Egea C, Cancelo L, Alvarez A, Fernández-Bolaños M, Barbé F. Obstructive sleep apnea and systemic hypertension: longitudinal study in the general population: the vitoria sleep cohort. *Am J Respir Crit Care Med* 2011;184:1299-304.

Obstructive Sleep Apnea (OSA) is a disorder characterized by intermittent episodes of apnea/hypopnea in which there are periodic oxygen desaturations. These episodes may also result in tachycardia, bradycardia and other EKG abnormalities. The prevalence of OSA per the Wisconsin cohort Study is reported as 4-9% for women and 9-24% for men. There is also an increased prevalence in age groups > 65. Prior observational studies have shown increased cardiovascular mortality from acute MI, stroke and sudden cardiac death from untreated severe OSA. The link between OSA and the development systemic hypertension has also been postulated. Prior Observational Studies (Wisconsin Sleep Cohort Study, Sleep Heart Health Study) demonstrated discordant results with a positive association seen only in the Wisconsin Sleep Cohort Study. This study was done to see if the diagnosis of OSA serves as an independent risk factor in the development of systemic hypertension.

This study was an observational cohort study done in Spain over 2 phases. Patients were excluded if they were on CPAP, had a known diagnosis of systemic hypertension or had undergone an uvulopalatopharyngoplasty. 2148 pts were eligible for the study and a total of 1557 pts completed the study. The patients with a diagnosis of OSA and no prior diagnosis of systemic hypertension were followed over 7-8 years. The results did not show an increased incidence of systemic hypertension in patients with OSA when other variables such as age, gender, fitness level, BMI, and neck circumference were accounted for.

The study was well done and supported the results of The Sleep Heart Health Study. The strengths of the study were its large sample size and its good design. Although there may not be a causal relationship between OSA leading to systemic hypertension, we can not deny the prevalence of hypertension in patients with OSA. From a clinical standpoint I would like to have another question answered.....should patients with newly diagnosed hypertension or multiple drug resistant hypertension undergo screening for obstructive sleep apnea?

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