

European Respiratory Society Annual Congress 2012

Abstract Number: 2698

Publication Number: P3872

Abstract Group: 4.2. Sleep and Control of Breathing

Keyword 1: Sleep disorders **Keyword 2:** Comorbidities **Keyword 3:** Systemic effect

Title: Resistant arterial hypertension and obstructive sleep apnea syndrome

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Body: Background: Resistant arterial hypertension is frequently paired with subclinical target-organ damage and additional higher cardiovascular risk. Several studies have confirmed the association between Obstructive Sleep Apnea Syndrome (OSAS) and resistant hypertension. Objective: Analyze the relationship between OSAS and resistant arterial hypertension. Methods: Resistant hypertension was defined as a daytime blood pressure of at least 140 mm Hg systolic or at least 90 mm Hg diastolic, despite stable use of a combination of 3 or more antihypertensive agents. The patients identified at the Internal Medicine department were referred to our Sleep Unit. A home respiratory polygraphy was then performed to study OSAS in all patients Results: A total of 21 patients were studied (11 men and 10 women), mean age 56±3 years and mean body mass index 32.9±1,5 kg/m². The mean systolic and diastolic pressures measured by the 24h-Ambulatory Blood Pressure Monitoring were of 140.8±15.3/86.4±2,4 mm Hg. Seventeen patients (80,9%) had OSAS and 47,6% had severe OSAS (AHI ≥ 30/h). The mean CT90 was 13,0±3,8 and the mean AHI was 26,2±4,3. The AHI was not correlated with the mean systolic or diastolic pressure. There were no differences in terms of mean systolic and diastolic pressures between the patients with severe OSAS and the patients with an AHI≤30. The presence of nondipping pattern was not associated with a higher prevalence of severe OSAS neither with a higher CT90. Conclusions: In accordance to previous studies, our results showed a high prevalence of OSAS (80,9%) in patients with resistant hypertension. This reinforces the need to screen these patients for OSAS since treatment with CPAP could improve blood pressure control.