

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 3150

**Publication Number:** P4015

**Abstract Group:** 4.2. Sleep and Control of Breathing

**Keyword 1:** Apnoea / Hypopnea **Keyword 2:** Sleep disorders **Keyword 3:** Sleep studies

**Title:** Resistant hypertension and obstructive sleep apnea

Nadia M.L. 24992 Amorim nadiamorim@gmail.com <sup>1</sup>, Luciene S. 24993 Araujo lucienenuutri@gmail.com <sup>1</sup>, Julia F.R. 24994 Fernandes juffernandes@ig.com.br <sup>1</sup>, Maria L.G. 24995 Rodrigues lourdesclinex@yahoo.com.br <sup>1</sup>, Debora C.T. 24996 Valenca biodebora@yahoo.com.br <sup>1</sup>, Fabiana B. 25009 Bassan fabibbassan@gmail.com <sup>1</sup>, Prof. Dr Marcia R.S. 25012 Torres marciarsimas@gmail.com <sup>1</sup> and Prof. Dr Antonio F. 25029 Sanjuliani sanjuliani@gmail.com MD <sup>1</sup>. <sup>1</sup> Faculty of Medical Sciences, State University of Rio De Janeiro, Rio de Janeiro, RJ, Brazil .

**Body:** Background: Obstructive sleep apnea (OSA) is considered an independent risk factor for cardiovascular disease and reported as the most common secondary cause of high blood pressure (BP) maintenance. Objective: To determine the prevalence of OSA and verify its association with endothelial function behavior and anthropometric parameters in patients with resistant hypertension (RHG) and BP controlled by medication (CHG). Methods: Cross-sectional study involving 40 hypertensive patients (20 in RHG and 20 in CHG), aged between 18 and 75 years. Endothelial function and OSA were assessed by peripheral arterial tonometry. Results: Patients were late middle-aged (RHG: 54.9±2.4 vs CHG: 56.1±2.4; mean±SE). The prevalence of OSA in CHG was 76.5% (apnea-hypopnea index=20.74±4.69), reaching 85% in RHG (AHI=12.39±1.89). In general, OSA was more frequent in men (93.7% vs 75%; p=0.0455, OR=3.86; 95% IC 0.99 to 5.09) and was correlated with weight (p=0.0007), BMI (p=0.0078) and waist (WaC) (p=0.0246). In hypertensive patients overall, OSA also presented an independent association with endothelial function (p=0.0297; OR=0.17; 95% CI 0.03 to 0.72). Both groups presented similar (p > 0.05) BMI (RHG: 31.3±1.26 vs CHG: 32.6±1.27 kg/m<sup>2</sup>), as well as WaC (RHG: 103±3.4 vs CHG: 100.1±2.7cm) and neck circumference (RHG: 38.9±0.7 vs CHG: 38±0.8 cm). Endothelial function evaluated by reactive hyperemia index was similar in both groups (RHG: 1.88±0.44 vs CHG: 2.03±0.43; p=0.47) as well as minimum saturation (RHG: 87.8±3.8 vs CHG: 83.3±10.6%). Conclusions: The findings of the present study suggest that, in hypertensive subjects, OSA occurs more frequently in men, being associated with endothelial dysfunction and correlated positively with weight, BMI and WaC.