

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 1262

**Publication Number:** P2071

**Abstract Group:** 2.2. Noninvasive Ventilatory Support

**Keyword 1:** Ventilation/NIV **Keyword 2:** Sleep disorders **Keyword 3:** COPD - diagnosis

**Title:** Triple O – A new respiratory syndrome?

Prof. Marta 9440 Drummond [marta.drummond@gmail.com](mailto:marta.drummond@gmail.com) MD <sup>1,2</sup>, Prof. Ana 9453 Santos [acsantos@med.up.pt](mailto:acsantos@med.up.pt) <sup>2,3</sup>, Dr. Tiago 9454 Pinto [tiagoffpinto@gmail.com](mailto:tiagoffpinto@gmail.com) <sup>1</sup>, Prof. Miguel 9455 Gonçalves [goncalvesmr@gmail.com](mailto:goncalvesmr@gmail.com) <sup>1,2</sup>, Dr. Anabela 9456 Marinho [a.n.marinho@tvitel.pt](mailto:a.n.marinho@tvitel.pt) MD <sup>1</sup>, Dr. Maria 9467 Sucena [marta.drummond@gmail.com](mailto:marta.drummond@gmail.com) MD <sup>1</sup>, Dr. Joao 9470 Almeida [malmeida@hsjoao.min-saude.pt](mailto:malmeida@hsjoao.min-saude.pt) MD <sup>1</sup> and Prof. Joao 9475 Winck [jwinck@hsjoao.min-saude.pt](mailto:jwinck@hsjoao.min-saude.pt) MD <sup>1,2</sup>. <sup>1</sup> Pulmonology Department, Centro Hospitalar São João, Porto, Portugal, 4200-319 ; <sup>2</sup> Medicine Faculty, Porto University, Porto, Portugal, 4200-319 and <sup>3</sup> Clinical Epidemiology, Predictive Medicine and Public Health Department, Medicine Faculty Porto University, Porto, Portugal, 4200-319 .

**Body:** Introduction- There is a growing number of patients needing nocturnal ventilatory support, presenting with Obesity-Hypoventilation Syndrome (OHS), Chronic Obstructive Pulmonary Disease (COPD) and Obstructive Sleep Apnea (OSA). As these three comorbidities seem so prevalent together and, as these patients, in the light of their demographic characteristics and ventilatory needs, seem different from those with only one or two of the pathologies, a new respiratory syndrome can be emerging-The Triple O Syndrome (TOS). Objective- To characterize TOS patients and compare their demographic characteristics and ventilatory needs with OHS patients. Materials and Methods- Forty-four patients with obesity (BMI > 30 kg/m<sup>2</sup>), COPD (FEV1/FVC < 70) and OSA (AHI > 5/h) were included. Exclusion criteria were pulmonary diseases others than COPD,  $\alpha$ -1-AT deficit, bronchiectasis, Cheyne-Stokes Breathing, Complex OSA and Central Sleep Apnea. These patients were compared to 46 OHS patients. Both groups started ventilatory support between 2009 and 2011. Results- TOS patients: mean age 69.4±9.1 years, 84.1% were male, mean BMI 35.8±4.5 Kg/m<sup>2</sup>, mean Epworth 11.4±4.8, mean FEV1 57.9%±19.5% predicted, median AHI 36.3/h, median PaCO<sub>2</sub> 47.2 mmHg, median IPAP 18.0 cmH<sub>2</sub>O, median EPAP 10.0 cmH<sub>2</sub>O, median RR 14 cycles per minute, 23.3% needed oxygen complement. When compared to OHS patients, TOS patients were older, leaner, the percentage of male gender was higher, had less severe OSA and lower RR when adapted to ventilatory support. Conclusions- Triple O patients seem to be an individualized group, with different demographic characteristics when compared to OHS patients. The ventilatory needs were similar between both groups, but the RR and the mask used, mainly nasal, in TOS patients.