

# European Respiratory Society Annual Congress 2013

Abstract Number: 5380

Publication Number: 5033

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

**Keyword 1:** Sleep disorders **Keyword 2:** No keyword **Keyword 3:** No keyword

**Title:** Effect of continuous positive airway pressure therapy on metabolic control in patients with morbid obesity and obstructive sleep apnoea

Dr. Neus 21986 Salord nsalord@gmail.com MD <sup>1,6,7</sup>, Dr. Mercè 21987 Mayos mmayos@santpau.cat MD <sup>2,7</sup>, Dr. Ana M. 21988 Fortuna afortuna@santpau.cat MD <sup>2</sup>, Dr. Carmen 21989 Monasterio cmonasterio@bellvitgehospital.cat MD <sup>1,6,7</sup>, Dr. Mercè 21990 Gasa mgasa@bellvitgehospital.cat MD <sup>1</sup>, Mrs. Cristina 21991 Esquinas crise4@hotmail.com <sup>3</sup>, Dr. Perez 25770 Antonio jperez@santpau.cat MD <sup>5</sup> and Prof. Josep M. 21992 Montserrat jmmontserrat@clinic.ub.es MD <sup>4,7</sup>. <sup>1</sup> Respiratory Medicine, Hospital Universitary De Bellvitge, Barcelona, Spain, 08970 ; <sup>2</sup> Respiratory Medicine, Hospital De La Santa Creu I Sant Pua, Barcelona, Spain, 08024 ; <sup>3</sup> Respiratory Medicine, Hospital Arnau De Vilanova, Lleida, Spain ; <sup>4</sup> Respiratory Medicine, Hospital Clinic I Provincial, Barcelona, Spain ; <sup>5</sup> Endocrinology, Hospital De La Santa Creu I Sant Pau, Barcelona, Spain ; <sup>6</sup> IDIBELL, IDIBELL, Hospitalet de Llobregat, Spain and <sup>7</sup> CIBERES, Instituto Nacional De Salud Carlos III, Barcelona, Spain .

**Body:** Obstructive Sleep Apnoea (OSA) is associated with an increased prevalence of metabolic syndrome (MetS) even in morbidly obese (MO) patients. The aim of the study was to address whether CPAP treatment could improve metabolic profile in this population. **METHODS:** A prospective multicentre study was performed in 98 consecutive naive CPAP patients with severe OSA (AHI>30) included in a bariatric surgery program. Patients with previous known diabetes were excluded. Patients were randomized to conservative (CT) versus CPAP treatment. Anthropometrical data, blood pressure, fasting blood measurements, homeostasis model assessment and oral glucose tolerance test (OGTT) were measured at baseline and after 12 weeks. MetS was defined according to National Cholesterol Education Program Adult Panel III modified criteria. **RESULTS:** 42 CPAP and 38 CT patients completed the study. Patients had an age of 46.7±9 years, 27.5% were men, they had a body mass index (BMI) of 47±6 kg/m<sup>2</sup>, a MetS prevalence of 79%, and an AHI of 56(40-86). Both groups presented a similar decrease of BMI (-0.97±2.6 vs -0.99±2.0, p=0.59). CPAP patients had a decrease in the altered OGTT % (from 49% to 26%, p=0,04), in MetS % (from 80,9% to 64%, p=0,039) and metabolic index (from 3(2-4) to 3(3-4), p=0,013). No changes were observed in CT group. When compared the differences between both treatments, only the changes in glucose after OGTT were significant (-0.52±1.57 vs 0.17±2.03, p=0.036). The difference on the reversal of MetS was not significant. **CONCLUSIONS:** In MO patients with severe OSA CPAP treatment at 3 months improved MetS but when compared to CT only the effect on OGTT remained significant.