European Respiratory Society
Annual Congress 2012

Abstract Number: 3387

Publication Number: P1910

Abstract Group: 1.2. Rehabilitation and Chronic Care

Keyword 1: Rehabilitation **Keyword 2:** COPD - management **Keyword 3:** Systemic effect

Title: Effects of pulmonary rehabilitation in patients with COPD with and without fat free mass depletion

Mr. Leonardo 16951 Silveira leonardotree@yahoo.com.br [1], Dr. Danilo C. 16952 Berton dcberton@gmail.com MD [1], Ms. Cassia C. 16953 da Costa CassiaB@feevale.br [2], Mr. Rafael M. 30594 de Souza Dcberton@gmail.com [2] and Prof. Dr Paulo J.Z. 16954 Teixeira paulozt@gmail.com MD [2]. [1] Internal Medicine, Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil and [2] Health Science Institute, Feevale University, Novo Hamburgo, Brazil .

Body: We aimed contrast the effects of exercise training in COPD patients with and without reductions in fat-free mass (FFM) and evaluate the relationship among changes in body composition, exercise capacity and health related quality of life. One hundred and four patients submitted to Pulmonary Rehabilitation (PR) were retrospectively stratified according their FFM status. FFM was measured by bioelectrical impedance and patients considered depleted if FFM index was ≤ 15 in women and ≤ 16 kg/m^2 in men). Saint George Respiratory Questionnaire (SGRQ) and 6 minute walk distance (6MWD) were evaluated before and after PR. Characteristics of all patients are following: 64.1±8.7 years; body mass index (BMI)= 25.1±4.7 Kg/m^2; FFM index= 17.1±3.0 Kg/m^2; FVC=66.4±20.1%; FEV_1= 38.9±15.2%; 6MWD= 395.3±85.5m; and oxygen saturation (SpO_2)=93.2±4.2%. Thirty two subjects (30.7%) were considered depleted. They had worse resting lung function and SpO_2 (CVF= 59.4±19.5 vs 69.6 vs 19.6%, p=0.02; FEV_1=33.6±13.2 vs 41.4±15.5%, p=0.02; SpO_2= 91.7±4.8 vs 93.9±3.8, p=0.02). Improvement in 6MWD and SGRQ after PR were not different comparing groups. There is no difference in weight alteration (0.14±3.3 vs -0.43±2.7 Kg) whereas depleted patients had a greater improvement in fat free mass (3.71±7.89 vs -0.29±2.56Kg; p<0.01). Therefore, 24 of 32 depleted subjects (75%) were no more considered depleted after PR. This improvement has no correlation with SGRQ and 6MWD gains after PR. Concluding, the clinical benefits of PR were not different comparing FFM depleted and non-depleted COPD patients. However, improvement in FFM was greater in depleted patients leading the majority of them to be considered non-depleted after PR.