

Pulmonary Rehabilitation

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Benefits of Pulmonary Rehabilitation in Patients With Idiopathic Pulmonary Fibrosis and Other Interstitial Lung Diseases

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PURPOSE: ILD is a group of pathologies that are grouped by similar clinical, radiological, and physiological conditions. However, these situations do not have the same functional compromises or conditions of quality and life expectancy. We intend to study a population of ILD with non-specific origin and IPF after a pulmonary rehabilitation program in Cali, Colombia.

METHODS: It is a quasi-experimental study of 28 patients divided into two groups, the first group with diagnosis of IPF and the second one with other ILD, who attended a pulmonary rehabilitation program from January 2015 to December 2016. Patients signed informed consent with prior approval of the ethics committee of the Institución Universitaria Escuela Nacional del Deporte. Clinical and sociodemographic data were collected at the beginning of pulmonary rehabilitation. The program had a duration of 8 weeks with 24 sessions of 1 hour each and consisted of continuous exercise in Treadmill for 30 - 40 minutes, initiating 60% of the estimated VO₂ obtained in 6MWT; increasing with the modified Borg scale and maintaining a score between 3 and 5. Muscular strengthening started at 50% of the maximum resistance (MR) increasing to 60% of MR for upper and lower limbs. Patients who used supplemental oxygen performed maximal exercise with 3 L / min per nasal cannula in order to induce gains in resistance to stress. HADS and SGRQ questionnaires, functional capacity with 6MWT, BMI and MRC dyspnea were performed at the beginning and at the end of the program. The data were analyzed in the statistical package SPSS version 24. Qualitative variables were presented in percentages and quantitative variables with normal behavior in mean ± standard deviation. Variables that did not normally distributed in median (Range Interquartile). The t-test for related samples and the Wilcoxon test were performed, p-value <0.05 was considered a statistically significant difference.

RESULTS: Men 15, mean age 56.2 ± 14.5. The first group consisted of 9 patients of IPF, and the second one consisted of 19 patients with other ILD. Smoking habit was 44% in IPF and 37% in ILD. The use of domiciliary oxygen was 56% in the IPF group and 47% in ILD. After the rehabilitation program, distance traveled improved 40mts (p-value = 0.1) in IPF and 69mts (0.000) in ILD group. MRC dyspnea in the IPF group improved 1.3 (p-value = 0.01) and 1.0 (p-value = 0.001) in ILD group. There was a significant improvement in quality of life and in the HADS questionnaire for both groups at the end of the program.

CONCLUSIONS: Pulmonary rehabilitation provides benefits in functional capacity, dyspnea, and health-related quality of life in both groups. Nevertheless, patients with IPF are shown to be more limited in functional capacity and non-statistically significant changes in distance traveled, because of the reduced sample of participants for this group.

CLINICAL IMPLICATIONS: The protocol used in this rehabilitation program shows to be multidisciplinary and beneficial for both groups. IPF shows to be a more compromised and limited pathology in several aspects. It is still necessary to strengthen and expand studies in the different ILD groups.

DISCLOSURE: The following authors have nothing to disclose: Nathalie Torres del Castillo, Luisa Paredes, Nathaly Shek, Hugo Hurtado Gutierrez, Jhonatan Betancourt-Peña

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