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The aim of the study was to assess the relationship between dyspnea and pulmonary and inspiratory muscle function impairment. We studied 20 male patients with a previous diagnosis of COPD in a stable situation. In all patients, performed pulmonary function test (PFT), maximal inspiratory and expiratory pressure measurements (MIP, MEP), and maximal symptom limited exercise test and submaximal constant exercise test. Dyspnea sensation was evaluated at the end of both exercise tests using a Borg scale (B). The same studies were carried out after a 4 week period of inspiratory muscle training. All patients had a moderate to severe airflow obstruction (FEV1: 37.6 ± 21%, FVC: 80.4 ± 15%, FRC: 140 ± 21%, RV: 159.4 ± 4%) and a reduction in MIP (54 ± 21%).

Conclusion: In contrast to previous suggestions we found no correlation between changes in dyspnea and lung function after inspiratory muscle training in COPD patients.

Dyspnea is one of the most common symptoms in COPD but its intensity is very among patients. The aim of this study was to assess the relationship between dyspnea and pulmonary and inspiratory muscle function impairment. We studied 20 male patients with a previous diagnosis of COPD in a stable situation. In all patients, performed pulmonary function test (PFT), maximal inspiratory and expiratory pressure measurements (MIP, MEP), maximal symptom limited exercise test and submaximal constant exercise test. Dyspnea sensation was evaluated at the end of both exercise tests using a Borg scale (B). The same studies were carried out after a 4 week period of inspiratory muscle training. All patients had a moderate to severe airflow obstruction (FEV1: 37.6 ± 21%, FVC: 80.4 ± 15%, FRC: 140 ± 21%, RV: 159.4 ± 4%) and a reduction in MIP (54 ± 21%).

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There was no significant correlation between VAS and change in lung function after inspiratory muscle training. Excluding the non-perceivers from the analysis, a weak correlation was found between VAS and change in Res (r = 0.50, p < 0.06).

Conclusions: In contrast to previous suggestions we found no correlation between changes in dyspnea and lung function after inspiratory muscle training in COPD patients.

Results: The frequencies of patients who had an objective reversibility (ΔFEV1) > 20% of the predicted value, N = 32) or no reversibility (ΔFEV1 < 5%, N = 38) classified by change in dyspnea are shown in the table.