A comparison of pulmonary function, functional exercise capacity and sleep quality in patients with chronic obstructive pulmonary disease and obstructive sleep apnea syndrome

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Aim: Chronic obstructive pulmonary disease (COPD) and obstructive sleep apnea syndrome (OSAS) are two diseases that are characterized by obstruction of pulmonary airways. The aim of this study was to compare pulmonary function, functional exercise capacity and sleep quality in patients with COPD and OSAS.

Materials and methods: Twenty-five COPD patients (21 M, 4 F) and 25 OSAS patients (16 M, 9 F) participated in the study. Pulmonary function were measured using a spirometer. Functional exercise capacity was evaluated using a six-minute walk test (6MWT). Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). Results: Parameters of pulmonary function, 6MWT distance and %6MWT distance were significantly lower in patients with COPD than those of OSAS (p<0.05). In patients with COPD, Borg dyspnea and fatigue were significantly increased and oxygen saturation was significantly decreased during 6MWT compared with OSAS patients (p<0.05). The PSQI sleep duration score was significantly lower, and PSQI sleep disturbances and subjective sleep quality scores were significantly higher in patients with OSAS (p<0.05). Conclusion: Pulmonary function and functional exercise capacity deteriorated in patients with COPD compared to OSAS patients. Exercise dyspnea and fatigue increases and oxygen saturation decreases in patients with COPD. In comparison with COPD patients, sleep duration and subjective sleep quality are adversely affected in patients with OSAS. Differences in sleep quality and exercise ratings in patients with OSAS may require special attention when implementing rehabilitation programs.