

European Respiratory Society Annual Congress 2013

Abstract Number: 272

Publication Number: P2153

Abstract Group: 1.1. Clinical Problems

Keyword 1: COPD - management **Keyword 2:** Oxygen therapy **Keyword 3:** Sleep studies

Title: Does 6 minute walk test predict nocturnal oxygen desaturation in COPD patients?

Dr. Sinem 2141 Iliaz snmkaraosman@gmail.com MD ¹, Prof. Tulin 2142 Cagatay tulcagat@istanbul.edu.tr MD ¹, Dr. Zuleyha 2143 Bingol kayazuleyha@yahoo.com MD ¹, Dr. Gulfer 2144 Okumus gulferokumus@yahoo.com MD ¹, Dr. Goksen 2145 Kuran goksenkuran@yahoo.com ², Dr. Raim 2146 Iliaz raimiliaz@gmail.com MD ³, Dr. Aysen 2147 Dokme aysenerer@yahoo.com MD ¹, Dr. Fatma 2148 Comce fatmacomce@yahoo.com MD ⁴, Prof. Esen 2149 Kiyani ekiyan@istanbul.edu.tr MD ¹, Prof. Zeki 2150 Kilicaslan zekikilicaslan@istanbul.edu.tr MD ¹, Prof. Turhan 2151 Ece turhanece@istanbul.edu.tr MD ¹ and Prof. Penbe 2152 Cagatay penbecag@istanbul.edu.tr MD ⁵. ¹ Department of Pulmonology, IU. Istanbul Medical Faculty, Istanbul, Turkey ; ² Department of Physical Therapy and Rehabilitation, IU. Istanbul Medical Faculty, Istanbul, Turkey ; ³ Department of Internal Medicine, IU. Istanbul Medical Faculty, Istanbul, Turkey ; ⁴ Department of Pulmonology, Yedikule Hospital for Chest Diseases and Thoracic Surgery, Istanbul, Turkey and ⁵ Department of Biostatistics, IU. Istanbul Medical Faculty, Istanbul, Turkey .

Body: INTRODUCTION: Patients with chronic obstructive pulmonary disease (COPD) who have nocturnal oxygen desaturation (NOD) should be treated with nocturnal oxygen therapy (NOT) for avoiding morbidity and mortality. Nocturnal oximetry is an expensive and time consuming test that used for evaluating NOD individuals. AIM: To evaluate whether desaturation during 6-minute walk test (6MWT) is useful for predicting NOD in COPD. METHODS: Stable moderate or severe COPD patients were enrolled in this study. Spirometry and carbon monoxide diffusion test (DLCO), arterial blood gas analysis, 6MWT and nocturnal oximetry were performed. Patients with obstructive sleep apnea, hypoxemic respiratory failure, and who were receiving noninvasive mechanical ventilation therapy were excluded. RESULTS: Totally 61 patients (55 male, age: 65.8±8.4) were analysed. Thirty of them had moderate and the others (n=31) had severe COPD. Forced expiratory volume 1 second was 1352±348ml (51.2%±11.8%). Patients who were desaturated during 6MWT had significantly lower DLCO, PaO₂, SaO₂ and higher PaCO₂ levels than the patients who did not desaturated (p<0.001, p=0.001, p=0.001, p=0.02). NOD was more common in severe COPD patients or the patients with higher CO₂ levels (p=0.02, p=0.001). Four patients (13%) with moderate COPD were desaturated during 6MWT, however they did not have NOD. Five (33%) of severe COPD patients who were desaturated during 6MWT(n=15) also had NOD. Moderate correspondence was found between 6MWT and NOD in severe COPD patients (Kappa=0.39, p<0.05). CONCLUSION: 6MWT can be recommended as a simple, cheap tool for predicting NOD and selecting individuals for NOT particularly in severe COPD.