



Which patient characteristics are associated with exercise-induced desaturation in COPD combined with hypertension?

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Abstract

Background: There are no agreed patient characteristics associated with exercise-induced desaturation (EID) in COPD combined with hypertension (HT).

Purpose: to identify associations between various patient characteristics and EID.

Methods: In total, 69 COPD patients (GOLD 2, group B) in remission with HT stage II $55,80 \pm 5,51$ y.o. (57 m, 12 f) were monitored. All patients underwent general examination, pulse oximetry, spirometry, echocardiography, chest X-ray. We divided patients into 2 groups depending on EID (declining oxygen saturation (SpO_2) during the 6-min walk test (6MWT) $\geq 4\%$ from baseline).

Results: In group with EID ($n=39$) females were less common ($\varphi=1,78$; $p<0,05$); radiologic findings of emphysema ($\varphi=3,51$; $p<0,01$), cor pulmonale signs ($\varphi=2,01$; $p<0,05$) and signs of right ventricular diastolic dysfunction were more common ($\varphi=2,67$; $p<0,01$); positive relationships ($p<0,05$) were found between the degree of reduction in SpO_2 ($RSpO_2$) during the 6MWT and dyspnea level (Borg Scale) before ($r=0,62$) and after ($r=0,63$) the 6MWT, fatigue level (VAS) ($r=0,68$), BODE index ($r=0,32$), Clinical COPD Questionnaire (CCQ) total score ($r=0,39$), the functional state CCQ domain score ($r=0,51$); negative correlations ($p<0,05$) were found between $RSpO_2$ during the 6MWT and the distance walked in the 6MWT (6MWD) ($r=-0,58$). In group without EID ($n=30$) $RSpO_2$ during the

6MWT was positively associated ($p < 0,05$) with age ($r = 0,39$), fatigue level (VAS) ($r = 0,42$); negative correlation ($p < 0,05$) were found between RSpO₂ during the 6MWT and the 6MWD ($r = -0,46$).

Conclusions: Male sex, dyspnea, fatigue, 6MWD, BODE index, quality of life (CCQ) are associated with EID in moderate COPD combined with HT stage II.

[Quality of life](#) [Comorbidities](#) [COPD - diagnosis](#)

Footnotes

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