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**Title:** Assessment of the BODE index, arterial stiffness and endothelial dysfunction in patients with chronic obstructive pulmonary disease

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**Body:** Aim: COPD is a respiratory disorder, but also having systemic effects. Cardiovascular diseases are leading cause of mortality in patients with COPD and have an important prognostic role. In this study, we investigated the mechanisms of COPD associated increased cardiovascular risk, measured by arterial stiffness, endothelial dysfunction and the BODE index. Method: Fifty men with stable COPD were compared with fifty healthy male control subjects who had approximately same age and normal lung functions. Cardiovascular assessments, which include evaluation of endothelial function, arterial stiffness and echocardiographic measurements, as well as BODE index, were carried out in all subjects. Results: Arterial stiffness parameters evaluated by photoplethysmographic measurement were similar in both groups. However, direct arterial stiffness were detected only in nine subjects with COPD. Nitrate mediated dilation (NMD) measurements were found to be worsened in patients with stable COPD than in control subjects. In the same model, flow mediated dilation (FMD) was associated with NMD positively. In patient group, the BODE index values were found to be statistically higher than the control group. Moreover, BODE index was negatively correlated with FEV<sub>1</sub>, body mass index and 6-minute walking test, but positively correlated with the MMRC dyspnea scale. Conclusion: The presence of arterial stiffness, endothelial function abnormalities and endothelium independent smooth muscle dysfunction may indicate the relationship between COPD and the increased risk of cardiovascular disease.