



## P41 24 h Arterial Stiffness Measurement on Healthy and COPD Patients

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### ABSTRACT

**Introduction:** Chronic obstructive pulmonary disease (COPD) is currently one of the leading causes of death worldwide. COPD frequently occur together with cardiovascular disease. The coexistence of the two diseases are associated with worse outcomes than either condition alone. ABPM and 24 h arterial stiffness parameters were measured in stabile COPD patients, who were free from any cardiovascular disease and control individuals for the detection of increased cardiovascular risk and for the detection of early atherosclerosis in COPD.

**Methods:** We measured 23 healthy ( $54 \pm 9.1$  years) and 26 COPD ( $57 \pm 9$  years) subjects in the study. ABPM and 24 h arterial stiffness parameters were oscillometrically measured with Arteriograph 24.

**Results:** We have found significant higher day- and night averages in systolic blood pressure (SBPbr)  $\{p = 0.032, p < 0.001\}$  systolic aortic blood pressure (SBPao)  $\{p < 0.001, p < 0.001\}$  aortic pulse wave velocity (PWVao)  $\{p < 0.001, p < 0.001\}$  and aortic augmentation index (Aixao)  $\{p < 0.001, p < 0.001\}$  in COPD patients than controls. In 26% of COPD patients did not reduced the nighttime blood pressure compared to daytime systolic blood pressure.

**Conclusion:** In this study we found elevated day- and night blood pressure and arterial stiffness parameters in COPD patients. These results are indicating the presence of earlier atherosclerosis and higher cardiovascular risk in patients with COPD than in control individuals.

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