



# COPD as a risk factor for carotid artery disease (CAD) and low-extremity artery disease (LEAD)

Daniela Buklioska Ilievska, Jordan Minov, Nade Kochovska Kamchevska, Marjan Baloski, Bozidar Poposki  
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## Abstract

We aimed to investigate the association between COPD and peripheral artery disease (PAD), the relation to the severity of airflow limitation and the level of serum C-reactive protein (CRP).

Cross-sectional study including 120 patients with initially diagnosed COPD, aged 40 to 75 years and 60 non-COPD subjects matched by age, smoking status, body mass index, as controls. All study participants underwent pulmonary evaluation (dyspnea severity assessment, baseline and post-bronchodilator spirometry, gas analyses, chest X-ray), Doppler ultrasonography and measurement of serum CRP.

Results presented statistically significant difference in presence of LEAD in COPD patients compared to controls (78.3% vs 38.3%;  $P < 0.001$ ). According to the Fontaine classification, COPD patients with LEAD were categorized in stages I, IIA and IIB (60%, 30% and 15%, respectively), whereas all controls with LEAD were in the Fontaine stage I. COPD patients with LEAD presented significant association between disease severity and clinical manifestations due to the vascular changes ( $P = 0.001$ ) and CRP ( $P < 0.05$ ). Comparison between presence of CAD in COPD and controls showed statistical significance (70% vs 36%;  $P < 0.0001$ ). The mean value of intima-media thickness (IMT) in COPD patients with CAD was significantly higher than its mean value in controls ( $0.8 \pm 0.2$  vs.  $0.6 \pm 0.1$ ;  $P = 0.0043$ ). IMT value in COPD patients with CAD was significantly related to FEV1

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SV Ruickbie et al., European Respiratory Journal, 2018

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Ridvan Aktan et al., European Respiratory Journal

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Aleksandar Lilov et al., European Respiratory Journal, 2018

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Therese Lapperre et al., European Respiratory Journal, 2020

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LI Jiahong et al., Pharmacy Today, 2019

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Daniel Langer et al., Journal of Applied Physiology, 2018

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FAN Yi-bo et al., Journal of Shanghai Jiaotong University (Medical Science), 2020

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