Title: Carotid wall intima-media thickness (IMT) in COPD patients

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Body: Background: Chronic obstructive pulmonary disease (COPD) can be associated with important comorbid diseases, including atherosclerosis of the blood vessels. Carotid wall intima-media thickness (IMT) is a marker of subclinical atherosclerosis. It can be non-invasively measured by B-mode duplex ultrasonography. Aim: To investigate the correlation between COPD and carotid atherosclerosis, as well as the associated risk factors. Material and methods: We performed carotid B-mode duplex ultrasonography in 55 patients with COPD, aged 55.4± 9.5 years and 20 healthy subjects as a control group. Increased IMT was defined as ≥ 1.2 mm. We evaluated the associated risk factors (gender, age, hypertension, hyperlipidemia, smoking). Results: Twenty-two patients (40%) with COPD and 6 patients (20%) without COPD had increased IMT (p<0.05). COPD patients with increased IMT were older smokers, with hypertension and increased lipid levels. No gender differences were noted (p>0.05). Conclusion: We found positive correlation between COPD and increased carotid wall IMT. However, further studies are needed that would include larger number of patients to find whether this association is due to COPD only, or due to the mutual influence of the associated risk factors.