

Protective effects of simvastatin and/or telmisartan on cardiovascular system in patients with mild to moderate chronic obstructive pulmonary disease (COPD).

Abstract:

The objective of this study is to evaluate the protective effects of simvastatin, telmisartan or their combination on cardiovascular system in patients with COPD. Eighty patients with mild to moderate COPD were participated in this study. They were recruited into four groups where the first group includes 20 patients on an inhaled β_2 - agonist only (control), the second group includes 20 patients on an inhaled β_2 - agonist plus 20mg/d simvastatin, the third group includes 20 patients on an inhaled β_2 - agonist plus 40mg/d telmisartan and the fourth group includes 20 patients on an inhaled β_2 - agonist plus combination of both simvastatin and telmisartan. Twenty apparently healthy subjects were selected to be a normal group for comparison. Baseline, 3 and 6 months periods were used to monitor patients. Assessing the plasma levels of hs-CRP, VCAM-1 and lipid profile. ANOVA method for statistics were used to compare the results. There was a great reduction in hs-CRP and VCAM-1 in addition to modulation of lipid profile after the use of simvastatin 20mg/d, telmisartan 40mg/d and their combination in COPD patients. Simvastatin 20mg/d, telmisartan 40mg/d and their combination exerted a protective effect on the cardiovascular system in COPD patients after 3 and 6 months of therapy by reducing hs-CRP, VCAM-1 and lipid profile. Key words: Simvastatin, telmisartan, COPD.