

題名:Effects of pravastatin on functional capacity in patients with chronic obstructive pulmonary disease and pulmonary hypertension.

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摘要:PH (pulmonary hypertension) often complicates the disease course of patients with COPD (chronic obstructive pulmonary disease) and is an indication of a worse prognosis. In the present study, we assessed whether pravastatin administration was effective in improving PH and exercise capacity in COPD patients with PH, and whether the pulmonary protection was mediated by inhibiting ET-1 (endothelin-1) production. In a double-blind parallel design, 53 COPD patients with PH were randomly assigned to receive either placebo or pravastatin (40 mg/day) over a period of 6 months at a medical centre. Baseline characteristics were similar in both groups. The exercise time remained stable throughout the study in the placebo group. After 6 months, the exercise time significantly increased 52% from 660+/-352 to 1006+/-316 s ($P<0.0001$) in pravastatin-treated patients. With pravastatin, echocardiographically derived systolic PAP (pulmonary artery pressure) decreased significantly from 47+/-8 to 40+/-6 mmHg. There was significant improvement in the Borg dyspnoea score after administering pravastatin. Despite unchanged plasma ET-1 levels throughout the study, urinary excretion of the peptide was decreased and significantly correlated with an improvement in exercise time in pravastatin-treated patients ($r=-0.47$, $P=0.01$). In conclusion, pravastatin significantly improved exercise tolerance, and decreased PH and dyspnoea during exercise in COPD patients with PH, probably by inhibiting ET-1 synthesis.