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Title: Effect of fluticasone propionate/salmeterol on exercise endurance in moderate-severe COPD

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Body: Objective To investigate the effect of Fluticasone Propionate/Salmeterol on exercise endurance and pulmonary function in patients with moderate-severe COPD. Methods 53 patients with moderate-severe COPD were randomly divided to two groups. Treatment group inhaled dry powder SFC(salmeterol 50ug, fluticasone Propionate 250ug) twice daily for 24 weeks. Control group got symptomatic treatment for 24 weeks. Predose and postdose pulmonary and cycle cardiopulmonary exercise test evaluations were compared. Results There were no difference in predose pulmonary and CPET between two groups. In treatment group, With SFC treatment for 24weeks, FVC, FEV_1, IC were significient increased; ITGV,RV and TLV were significient decreased($p<0.05$); Peak WR increased, but had no statisticly difference. Peak VO_2, peak VO_2/Kg, peak VCO_2, peak O_2 pulse, peak VE were significient increased($p<0.05$); VD/VT and lowest VE/VCO2 were decreased from ($p<0.05$); postdose improvement in IC was significantly correlated with the increase in Peak VO2, Peak VO2/Kg, Peak VE, VD/VT and Lowest VE/VCO_2,but not with FEV_1. Predose and postdose pulmonary and CPET were no changes in control group. Conclusion Exercise tolerance in patients with moderate-severe COPD were distinguished impaired. After long term SFC treatment, lung hyperinflation at rest and exercise were decreased, exercise endurance were increased when compared with symptomatic treatment. CPET is useful in COPD patients as it allows objective measurement of the exercise tolerance and evaluation of the response to therapeutic intervention.