Abstract: P282

Safety profile of regadenoson combined with low-level exercise in patients with asthma-chronic obstructive pulmonary disease (COPD) overlap syndrome (ACOS)

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Background

Asthma-COPD overlap syndrome (ACOS) is defined as the presence of persistent airflow limitation combined with features of both asthma and COPD. ACOS patients show more severe respiratory symptoms, significantly worse quality of life, and more frequent exacerbations, compared with either COPD or asthma patients.

Purpose

We aim to assess the safety profile and the haemodynamic response of regadenoson (REG), a selective agonist of A2A adenosine receptors, in subjects with ACOS referred for myocardial perfusion imaging (MPI).

Methods

We studied prospectively 9 patients with diagnostic criteria for the ACOS (3 men and 6 females, mean age 72.4±7.2 y, range: 63 – 81 y) referred for MPI. Stress was 4 minutes of low-level exercise with a 15s-bolus intravenous injection of 0.4 mg of REG at 1.5 min, followed by 99mTc-MPI radiopharmaceutical at 2 minutes. Past medical history, lung medications, clinical symptoms during stress, oxygen saturation (SatO2), and changes in systolic blood pressure (SBP) and heart rate (HR) were evaluated.

Results

A high prevalence of cardiovascular risk factors was observed in the evaluated patients: Dyslipidaemia (88%), hypertension (78%), obesity (55%), ex-smokers (33%), and diabetes mellitus (33%). The baseline respiratory medication was B2-agonists combined with either corticoids (44%) or anticholinergics (22%). Clinical symptoms were self-limiting: Fatigue (55.6%), dyspnoea (33.3%), feeling hot, dry mouth sensation (22.2%, respectively), chest discomfort, dizziness, and gastrointestinal discomfort (11.1%, respectively). 11.0% of patients did not report events. We observed no significant changes in SBP following REG administration (143.3±24.4 vs 152.6±22.0 mmHg, p=0.2), but the mean HR increased significantly (70±13 vs 105±27 b.p.m., p<0.05).

Conclusions
Regadenoson combined with low-level exercise is safe and well tolerated in patients with stable asthma-COPD overlap syndrome.