

Publication

Acute effects of aerosolized iloprost in COPD related pulmonary hypertension - a randomized controlled crossover trial

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Inhaled iloprost potentially improves hemodynamics and gas exchange in patients with chronic obstructive pulmonary disease (COPD) and secondary pulmonary hypertension (PH).; To evaluate acute effects of aerosolized iloprost in patients with COPD-associated PH.; A randomized, double blind, crossover study was conducted in 16 COPD patients with invasively confirmed PH in a single tertiary care center. Each patient received a single dose of 10 µg iloprost (low dose), 20 µg iloprost (high dose) and placebo during distinct study-visits. The primary end-point of the study was exercise capacity as assessed by the six minute walking distance.; Both iloprost doses failed to improve six-minute walking distance ($p = 0.36$). Low dose iloprost (estimated difference of the means -1.0% , $p = 0.035$) as well as high dose iloprost (-2.2% , $p < 0.001$) significantly impaired oxygenation at rest. Peak oxygen consumption and carbon dioxide production differed significantly over the three study days ($p = 0.002$ and $p = 0.003$, accordingly). As compared to placebo, low dose iloprost was associated with reduced peak oxygen consumption (-76 ml/min, $p = 0.002$), elevated partial pressure of carbon dioxide (0.27 kPa, $p = 0.040$) and impaired ventilation during exercise (-3.0 l/min, $p < 0.001$).; Improvement of the exercise capacity after iloprost inhalation in patients with COPD-associated mild to moderate PH is very unlikely.; Controlled-Trials.com ISRCTN61661881.

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