The role of inhaled corticosteroids (ICS) in the long-term management of COPD is still unclear. Therefore, we performed a meta-analysis of the three two-year studies published on this subject (Kerstjens et al: N Engl J Med 1992; 327: 1413-9, Derenne et al: Am J Respir Crit Care 1995; 151: A463, Renkema et al: Chest 1996; 109: 156-62). Patients with "asthmatic features" were excluded by analyzing the original data. The effect on FEV1 was assessed by a multiple repeated measurement technique in which time and drug effects were investigated. 95 (of the original number of 140) Patients treated with ICS (81 with 1500 µg beclomethasone, 6 with 1560 µg budesonide, and 8 with 800 µg beclomethasone) were included. 88 Patients treated with placebo were included (of the initially 144 patients). No baseline differences were observed (mean age 61 years, mean FEV1 = 45%pred). Worsening of the disease was the drop-out reason in 4 patients of the ICS group vs. 9 of the placebo group (p = 0.11). The estimated two-year difference in the probronchodilator FEV1 was +0.0001L (95% confidence interval (c.i.)=+0.010L to +0.017L) in the ICS group versus placebo, the probronchodilator FEV1 showed a difference of +0.083L (95% c.i.:+0.003L to +0.163L). In conclusion, this meta-analysis showed beneficial long-term effects of ICS on the FEV1 in patients with a clear diagnosis of COPD.

2512 Assessment of domiciliary oxygen therapy effectiveness by means of arterial blood gas analysis at home and long-term oximetry in patients with COPD

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Aim: 1. To assess if domiciliary oxygen therapy (DOT) in COPD patients, is effective to reach, breathing oxygen, a resting PaO2 ≥ 60 mm Hg and a CT < 15% while breathing oxygen <15%. 2. To assess the cause of DO failure: Malfunctioning oxygen delivery system (MODS), Insufficient prescribed oxygen dose (IOD), Patient's mistake (PM), or Mixed reasons (MR). 3. To analyse the sensitivity of long-term home oximetry in detecting patients with a resting, breathing oxygen, PaO2 < 60 mm Hg.

Methods: 73 clinically stable COPD patients with chronic respiratory insufficiency, without other heart, pleural, lung or thorax notable pathologies that have been using DO for at least 1 year (55 concentrations, 8 cylinders and 2 liquid oxygen system) were consecutively recruited from pulmonology control of 5 Hospitals. Interventions and Measurements: Arterial blood gases determined at rest, breathing oxygen at patients' home and breathing room air in the hospital. Technical check of oxygen sources using a gas analyzer and a precise photometer. Oximetry recorded during the oxygen therapy time, considering two different periods: "day with oxygen (DOX)" and "sleep with oxygen (SOX)."

Results: (1) 9 patients (12.3%) of 73 studied were excluded because they had a resting room air PaO2 ≥ 60 mm Hg. (2) 29 patients (45.3%) of 64 with a resting room air PaO2 < 60 mm Hg, were poorly controlled with their DO: 13 (20.3%) showed a resting, breathing oxygen, PaO2 ≥ 60 mm, 16 (25%) had a CT > 15% during DOX and/or SOX. (3) 26/73 (36%) oxygen delivery systems supply flows lower or 75% of flow indicated on their caudalimeter. 54/55 concentrators deliver oxygen with concentration above 90%. (4) The causes of DO failure were: MODS 6/29, IOD 14/29, PM 2/29 and MR 7/29. (5) 12 patients of 13 with a resting breathing oxygen PaO2 < 60 mm Hg had a CT > 15% during DOX and/or SOX. Sensitivity of oximetric recording = 92.3%. Conclusions: (1) The insufficient oxygen flow by MODS, IOD, PM or MR produce unsatisfactory control of hypoxemia in 45% of COPD patients with DO studied. (2) The long-term oximetry is an adequate method to evaluate the effectiveness of DO. It should be used systematically. Supported by Fissas 90/152.