

EOSINOPHILIC AIRWAY INFLAMMATION IN COPD AND ASTHMA

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Eosinophilic airway inflammation is regarded as a typical feature of asthma, while in COPD neutrophils seem to be predominant inflammatory airway cells. **Objectives:** To compare the cellular components of airway inflammation in patients with newly diagnosed COPD and asthma. **Materials:** 17 patients with mild and moderate COPD (M/F 10/7, age 57±11 yr) and 22 patients with mild to moderate asthma (M/F 12/10, age 36±14 yr). None of the patients has been treated with steroids for at least 3 months. **Methods:** All patients underwent clinical examination, lab studies, skin-prick tests, pre- and post-bronchodilator spirometry, methacholine challenge test. Sputum induction was performed according to the ERS protocol with total and differential cell count assessment. **Results:** Eleven (69%) COPD patients and all asthma patients ($p<0.05$) showed airway hyperresponsiveness. An increased number of eosinophils was found in both study groups. However, there were no significant differences in the cellular composition of induced sputum between asthma and COPD patients. The total number and percentage of eosinophils in COPD patients ($2.1\pm 3.1 \times 10^6$ cells/ml and $30\pm 17\%$, respectively) was not different from that in asthma patients ($1.0\pm 1.4 \times 10^6$ cells/ml and $22\pm 16\%$, respectively). In COPD group positive correlation between the total number and the percentage of sputum neutrophils and the number of pack-years of cigarettes smoked ($r=0.7$ and 0.6 , respectively, $p<0.05$) was noted. Surprisingly, in COPD pts the number of eosinophils in sputum corresponded with methacholine PC_{20} ($r=0.6$, $p<0.05$). **Conclusions:** Eosinophils seem to be important inflammatory cells not only in asthma but also in COPD.