

## Clinical Research Results Abstract

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### COPD patients with asthma, characteristics and risk of exacerbations

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**Aim:** Comorbid asthma is a well-known risk factor for exacerbations in patients with COPD. The aim of this study was to characterize COPD patients with a history of asthma and to prospectively analyse factors associated with exacerbations.

**Method:** Patients from the Swedish Tools for Identifying Exacerbations (TIE)-study with spirometry-verified COPD. Questions about asthma, allergy, smoking habits were questionnaire-assessed at baseline and exacerbations at the one-year follow-up. Measurements of lung function,  $F_{E}NO_{50}$ , blood eosinophils, IgE-sensitization (Phadiatop) at baseline.

**Results:** Out of 571 patients, 474 (women 57%) participated in the follow-up, where 154 (33%) had a history of asthma (women 62%). Of those with asthma, 60% had a history of pet- and/or pollen allergy, 29% (n=92) had an IgE-sensitization, means of eosinophils was 0.2 (SD 0.2),  $FEV_1$  55.8 (SD 16.7) % pred., median (IQR)  $F_{E}NO_{50}$  13 (12) and 25 % were current smokers.

In patients with comorbid asthma 41% had at least one exacerbation during the follow-up year compared to 28% in patients without asthma ( $p=0.007$ ); OR (95% CI) 1.6 (1.07-2.49) with adjustments for age, sex,  $FEV_1$  and smoking status. Having exacerbations was associated with  $FEV_1$  OR (95%CI) 0.9 (0.91-0.97) and IgE-sensitization 3.1 (1.04-9.26) in this group with concurrent asthma after adjustments for age, sex,  $FEV_1$ , reported pet- and/or pollen allergy, IgE-sensitization and smoking status.

**Conclusion:** COPD patients with comorbid asthma had a higher risk of exacerbations. Lower lung function and IgE-sensitization were associated to exacerbations in the one-year follow-up.

#### Declaration of Interest

No conflicts of interest in relation to this study