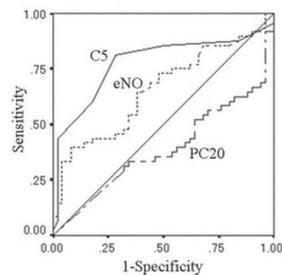


value of C5 to predict MI on the efficacy of BDT on cough was solution number of 4.5 (2.8 mmol/L) with a sensitivity of 0.81 and specificity of 0.72.

ROC curve for efficacy of bronchodilator (BD) therapy (excellent and good response (cough scale 5 to 0 points) vs. poor response (cough scale 10 to 8 points) at the second visit following 6-day BD therapy)



*The efficacy of treatment on cough was assessed with a subjective cough symptom scale (cough scale). Cough symptom was scored on a scale from 0 to 10 points, based on the severity and frequency of their cough for 24 h at the first visit and after the 6-day BDT (the second visit). A scale of 0 meant "no cough," whereas a scale of 10 denoted "cough as bad as at first visit".
Efficacy: excellent: 0,1,2, good: 3,4,5, fairly good: 6,7, poor: 8 or more points of cough scale at the second visit.
Positive effect was defined as excellent and good and negative effect was defined as poor. Patients showing fairly good was excluded from this analysis.

Conclusions: Measurement of C5 may be useful for predicting efficacy of BDT on chronic non-productive cough, in other words for diagnosis of CVA.

P4056

Systemic inflammation in COPD: Is there a link with body composition?

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Introduction: COPD is characterized by a low grade systemic inflammation which has an effect on body composition. We examined the relationship between systemic inflammation and body composition using the Body Mass Index (BMI) and Fat Free Mass Index (FFMI).

Methods: A cohort of 37 stable COPD patients (GOLD I-IV) was included. BMI was calculated as weight/height² and the FFMI as fat free mass/height². Systemic inflammation was visualized by expression of activation markers on peripheral blood neutrophils using flow cytometry.

Results: The responsiveness of neutrophils for formyl peptides (like fMLF) is one of the most sensitive markers for detecting in vivo activation of neutrophils. Peripheral blood neutrophils are less responsive for fMLF under conditions of systemic inflammation, which is associated with disease severity. This responsiveness in the context of expression of CD11b and the active form of FcγRII was positively correlated with BMI (Table 1). We also found that CCR3, a marker mainly expressed on pulmonary neutrophils correlated with BMI. In addition, a positive correlation (Table 1) between FFMI and BMI was found in COPD patients.

Table 1. Indices of systemic inflammation correlate with a low BMI

Correlation between	BMI	Sig (2-tailed)
FFMI	0.870	0.000
Active form of FcγRII after fMLF stimulation	0.422	0.012
CD11b after fMLF stimulation	0.415	0.013
CCR3	-0.402	0.017

Conclusion: A low BMI is associated with a low grade systemic inflammation in COPD patients visualized by systemic activation of neutrophils. In COPD patients the FFMI correlated with BMI, which suggests that the systemic inflammation in COPD patients is associated with a muscle wasting phenotype.

P4057

The relationship between comorbidities and systemic inflammation in patients with COPD

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Objectives: Although the effect of comorbidities on morbidity and mortality of COPD is better understood, the discussion about the role of systemic inflammation on development of comorbidities is going on. We aimed to investigate the relationship between systemic inflammation and comorbidities in patients with COPD.

Methods: Comorbidities, systemic and local inflammation markers were investigated in 50-stable COPD patients and 42-healthy adults who admitted to our out-patient clinic. Venous blood samples for markers of systemic inflammation (CRP, fibrinogen, AAT, TNF-α, sTNF-R, IL-1, IL-6, IL-8, neutrophils, lymphocytes, eosinophils) and induced sputum samples for local inflammation markers (TNF-α, IL-6, neutrophils, lymphocytes, eosinophils) were examined.

Results: At least one comorbidity was determined in 80% of patients with COPD

and 47.6% in the controls. The depression, cachexia, pulmonary hypertension and prevalence of coronary artery disease in patients with COPD were higher than the controls (p<0.05). All markers of systemic inflammation and local inflammation, except serum mean IL-6 level and mean percentage of peripheral blood eosinophils, were significantly found higher in patients with COPD. In addition, the mean serum TNF-α and IL-8 levels were found to be associated with presence of comorbidity in patients with COPD. The determined comorbidities which are anxiety, depression, anemia, heart disease, osteoporosis and metabolic syndrome were found to be associated with one or more systemic inflammatory markers.

Conclusion: The observed comorbidities in COPD is closely related to systemic inflammation however we think that the exact mechanism of each comorbidity needs to be further investigated.

P4058

Is the body mass index a determinant of inflammatory status and quality of life in asthma?

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Introduction: The aim of our study was to determine the relationship between body mass index (BMI), alveolar nitric oxide (CaNO), and the health status of asthmatics by applying the quality of life questionnaire Sydney-modified (AQLQ-S).

Material and methods: We studied 139 asthmatics (GINA) between 15 and 75 yr of age (men 45 and women 94) and several degrees of severity. We measured anthropometric variables, baseline spirometry, and nitric oxide exhaled (eNO) at multiple flows (50, 100, 150, 200 and 250 ml/s). Bronchial nitric oxide flux (JaNO) and CaNO were assessed according to Tsoukias model. All patients completed the AQLQ-S questionnaire. For comparisons between two groups, T-student test was used. The relations between NO parameters and other markers were analyzed with partial correlations adjusted for asthma severity.

Results: The mean BMI was 26.46±4.97 kg/m², CaNO 3.89±4.7 ppb and JaNO 2401±2307 nl/sec. There were no statistically significant differences in values of CaNO and JaNO between obese asthmatic group and non obese. The AQLQ-S scores obtained were (mean ± SD): total score: 5.62±1.08; shortness of breath: 5.73±1.14; mood: 5.21±1.24, social restriction: 5.92±1.25; and concern: 5.69±1.10

Correlations between BMI and AQLQ-S scores

	Total score	Shortness of breath	Mood	Social restriction	Concern
BMI	-0.26 (p=0,011)	-0.30 (p=0,004)	-0,15 (p=0,13)	-0,30 (p=0,003)	-0,13 (p=0,20)

Conclusions: Obesity determines deterioration in the quality of life of patients with asthma especially in two dimensions: 1) shortness of breath and 2) social restriction. CaNO and JaNO show no relation to the inflammatory state that involves obesity and have no expression in the health questionnaire score used.

P4059

A comparative study of the correlations of the COPD assessment test (CAT) scores and high sensitive CRP levels to SPO₂, FEV₁, BODE index, and exacerbation rate

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Background: High sensitive CRP is used as a marker of systematic inflammation in COPD. Results have shown an inverse relation between serum hs-CRP and FEV₁, except for small study which did not report any correlation between hs-CRP level and FEV₁. However, we hypothesize that the raised hs-CRP is not closely related to the multiple consequences of COPD. CAT is a simple questionnaire for assessing and monitoring COPD. Thus, this study was undertaken to investigate the correlations between CAT score and SPO₂, FEV₁, BODE index, and exacerbation rate, and compare it with the correlations to the serum hs-CRP.

Method: We studied 60 patients with stable COPD and 15 normal subjects as a control group. SPO₂, BODE index, pulmonary function test and exacerbation rate were determined in COPD patients. Serum level of hs-CRP was measured in all patients and the control group. Then, the CAT questionnaire was completed by patients.

Results: Hs-CRP level was significantly raised in patients (p=0.005). In these patients, correlations of hs-CRP level with BODE index appeared significant (p=0.008). However, the correlation between hs-CRP with SPO₂ and FEV₁ did not appear significant (p=0.47, p=0.17 respectively). Also, the CAT score correlations with SPO₂, FEV₁, BODE index, and exacerbation rate in the previous year were all found to be significant (p=0.000, p=0.000, p=0.000, p=0.017, respectively).

Conclusion: We conclude that SPO₂, FEV₁, BODE index and exacerbation rate are more correlated with the CAT scores than with the serum level of hs-CRP in stable COPD patients. The findings of this study should be considered in management of stable COPD.