2.9±1.7 and 201±67 mg/dL in smokers, and 1.8±0.8 and 158±42 mg/dL in nonsmoker controls, respectively (one-way ANOVA, p=0.02 for CRP and p=0.007 for fibrinogen). Total bacterial load correlated with serum CRP (r=0.52, p=0.007), but not with fibrinogen in COPD patients.
In conclusion, higher airway bacterial load, serum CRP and fibrinogen levels were observed in stable COPD patients as compared to healthy non-smoker controls. The increased CRP level seems to be related to higher airway bacterial load in COPD patients.

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Relationship between severity of bronchial and systemic inflammation, and dyspnea, exercise performance and quality of life in patients with stable COPD

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We aimed to investigate the relationship between severity of airway and systemic inflammation and dyspnea, exercise performance and quality of life in patients with stable COPD.
35 mild to moderate stable COPD patients and 18 age-matched healthy controls were studied. Neutrophil elastase, myeloperoxidase (MPO), TNF-α and IL-8 in bronchoalveolar lavage (BAL) and CRP, fibrinogen, IL-8 and TNF-α levels in serum were measured. Dyspnea scores with Baseline Dyspnea Index (BDI), Modified Borg Scale and Visual Analog Scale (VAS), quality of life with Saint George's Respiratory Questionnaire (SGRQ), Turkish version, and exercise capacity with a 6 minute walk test (6MWT) were evaluated.
BAL MPO, IL-8 and TNF-α, and serum CRP, TNF-α and IL-8 levels were significantly higher in COPD patients as compared to controls (p=0.03, p=0.0001, p=0.04, p=0.004, p=0.03, and p=0.02, respectively). Serum IL-8 and TNF-α levels were weakly correlated with BAL levels (r=0.3, p=0.05, and r=0.34, p=0.04). BAL IL-8 levels and MPO correlated with BDI (r=-0.37, p=0.04 and r=-0.4, p=0.02, respectively), and with all scores of SGRQ (r=0.48, p=0.005 and r=0.44, p=0.01, respectively, for total score). Serum CRP correlated weakly with BDI (r=0.32, p=0.03), but not with SGRQ scores. 6MWT distance did not correlate with any of inflammatory markers in serum or BAL.
In conclusion, the severity of dyspnea and quality of life were related with airway inflammation other than systemic inflammation in patients with clinical stable COPD. Intense of airway inflammation were closely associated with the poorer dyspnea and health status, but not with the exercise performance.

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Could concentration of matrix metalloproteinase-9 in serum of COPD patients change into the basic disease progress and a degree of airway obstruction?

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Background: COPD is a chronic inflammatory process leading to irreversible airway obstruction. The previous studies showed that the increased level of matrix metalloproteinases (MMPs), especially MMP-9 in serum may play a crucial role in a local and systemic inflammatory process in COPD.
Study aim: 1. The estimation and comparison of sera MMP-9 concentration in COPD patients and a healthy control group.
2. The evaluation of correlation between MMP-9 concentration and a degree of airway obstruction in COPD patients.
Materials and methods: 48 COPD patients, diagnosed basing on GOLD 2005 criteria (average age 64,2 yr±10,7) and 45 healthy controls (average age 54,2 yr±9,6) were enrolled into the study. In both groups spirometry tests were performed using Jaeger system. The MMP-9 concentration in the serum taken from both group was studied using the enzyme-linked immunosorbent assay (ELISA) technique.
Results: Patients with COPD had increased levels of serum MMP-9 compared with the control group (p= 0,009). In COPD group MMP-9 concentrations were negatively correlated with FEV1 (p=0,003, r=-0,411) and with FEV1/FVC ratio (p=0,001, r=-0,349). Not significant correlation between MMP-9 concentration and FVC was observed.
Conclusions: The results of this study show that MMP-9 may play an important role in the systemic inflammatory process in COPD. The higher serum concentration of MMP-9 is connected with the degree of airway obstruction and progression of the disease.

E327

Is there a relationship between severity of COPD and C-reactive protein (CRP) levels?

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Background: Arising number of papers deals with novel relationship between CRP levels and severity of stable COPD, but similar comparison in hospitalized (not stable) patients (pts) is still lacking.
Methods: CRP levels at the time of admission were measured in 27 consecutive hospitalized COPD pts (40 male, 37 female) and searched for their relative FEV1%, FVC%, severity of COPD according to GOLD classification, and whether the patient was hospitalized for COPD for the first time or repeatedly. The data were processed by methods of description statistics, correlation analysis and analysis of variance (Kruskal-Wallis test).
Results: Negative correlations were found between CRP levels and FEV1% (r=-0.236), FVC% (r=-0.238), both at p <0.05. Mean (and median) of CRP levels in mg/l were calculated in GOLD stadium as follows: st. 0:1.4(1.4), I: 7.7(5.4), II: 9.4(5.8), III.: 26.2(8.1), IV: 18.5(9.1), with significance p<0.05 only between GOLD 0 to all other GOLD stadia. Mean (and median) of CRP were 5.2(4.8 mg/l) in first hospitalized against 23.8(8.2 mg/l) in repeatedly hospitalized pts (p= 0.058).
Conclusion: In our study we found out significant relationships between CRP levels in hospitalized, not stable COPD pts and COPD severity expressed as spirometric parameters FEV1% or FVC%, and weak significance level as for the rehospitalization for COPD, and for GOLD stadium. These results are similar to those referred in another papers concerning the stable COPD pts.

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VIP (vasoactive intestinal polypeptide) and vitamin C in the serum of COPD patients before and after therapy

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VIP was determined by RIA kits from the laboratory of the Hammersmith Hospital in London, and serum ascorbate concentration was determined using spectrophotometric method. The serum level of VIP and C vitamin were measured in 40 non-smokers patients. Patients were divided into two groups. Group I included 20 patients with COPD in stable state and Group II: 20 patients with exacerbation of the disease. Diagnosis was established by clinical, roentgenographic, laboratory and lung function examinations. laboratory analyses included blood leukocyte count, ESR and serum fibrinogen. The aim of the study was to investigate a possible neurotransmitter role of VIP on airway smooth muscle relaxation in COPD patients. Also we compared the values of serum acsorbate concentration and serum level of VIP with lung function and laboratory tests of inflammation. Spirometry in Group I patients showed: VC=2.38±0.70 l (74.45%), FEV_1=1.39±0.41l(5627%) and 100·FEV_1/VC=61.39±11.92 and Group II: VC=2.17±0.81 l (64.78%), FEV_1=1.28±0.43 l (52.12%) and 100·FEV_1/VC=57.43±14.91. Our results showed significantly decreased serum vitamin C concentration and siguificantly higher serum levels of VIP in COPD patients during exacerbation before therapy compared to patients after therapy. The patients with COPD in stable state show normal serum levels of VIP and vitamin C before and after therapy.

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Prevalence of COPD in Zonguldak province of Turkey

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Chronic Obstructive Pulmonary Disease (COPD) is increasingly recognized as a leading cause of global morbidity and mortality. In this study, we aimed to investigate COPD prevalence in Zonguldak province of Turkey, located in western Blacksea region. Adult population over 18 living in central Zonguldak were enrolled to the study. They were selected according to cluster sampling methods based on regional inhabitant listings. 611 adult persons were finally enrolled to the study. They were interviewed face to face, and were given a questionnaire.

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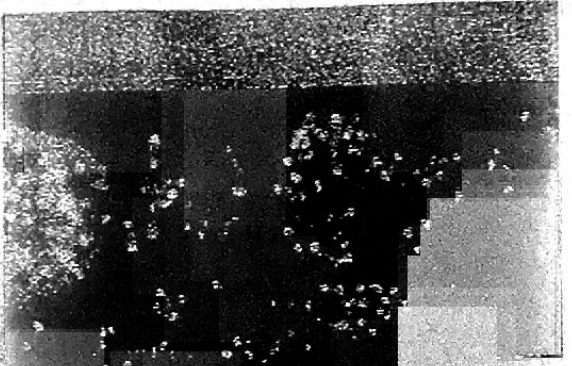

ABSTRACTS
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