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PLASMA HOMOCYSTEINE IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE PATIENTS**Mohammad Hossein Rahimi-Rad, Yosef Rasmi, Alireza Moaied-Kazemi***Urmia University of Medical Sciences, Urmia, Iran*

Patients with chronic obstructive pulmonary disease (COPD) are at increased risk cardiovascular disease. On the other hand recent studies have found that total plasma homocysteine (tHCY) is a risk factor for heart disease. There have been few studies of plasma homocysteine levels in COPD patients. We tested the hypothesis that tHCY would be elevated in patients diagnosed with COPD compared with controls.

Methods: We studied 40 patients with diagnosed COPD according to GOLD criteria and 51 asymptomatic subjects (controls) with normal spirometry. We measured forced expiratory volume in one second (FEV₁), forced vital capacity (FVC), tHCY, high sensitive C-reactive protein (hs-CRP) level.

Results: There was no difference between controls vs. COPD patients in mean age (COPD group 66.98±10.3 and 66.02±8.7 and gender. Mean tHCY was for COPD, 19.51 (SD=9.5) mmol/L vs. 18.22 (SD=8.5) mmol/L in controls p=0.5 Pearson's Correlation coefficient between tHCY with age, FEV₁, FEV₁/FVC, hs-CRP were -0.052, -0.074, -0.253, -0.136 and 0.001 respectively. For all p>0.4

Conclusions: Although plasma homocysteine tended to be higher in COPD than control group, however it was not significant statistically. It is necessary to investigate further COPD relationship with homocysteine.

POLYVALENT MECHANICAL BACTERIAL LYSATE TREATMENT IN COPD: NEW IMMUNOLOGICAL EVIDENCE**F. Braido*, E. Traggiai[§], G. Lanzilli[¶], G. Bazzurro[^], C. Folli*, V. Garelli*, C. Lagasio*, A.M. Riccio*, G.W. Canonica*,****G. Melioli[^]****Clinica delle Malattie Respiratorie e Allergologia Università di Genova; §Laboratorio di Immunopatologia e Reumatologia, ¶Laboratorio di Immunologia CNR Roma; ^Laboratorio centrale di Analisi, Istituto G. Gaslini, Genova, Italy*

Background: In COPD lung defence appears to be disrupted as a result of exposure to smoke and other environmental irritants. Patients becomes susceptible to repeated acute airway mucosal infections with viruses and bacterial pathogens, leading to episodes of increased inflammation and worsened symptoms, which are clinically diagnosed as exacerbations of COPD.

Aims and Objectives: In this double blind placebo controlled study, we analyzed the immunological effect of PMBL, administered to a population of Chronic Obstructive Pulmonary Disease (COPD) patients.

Methods: 22 moderate severe/very severe COPD patient (mean age 77,30±7,62; mean FEV₁ post BD 46,35±0,13) patients were randomly enrolled to a treatment schedule of one tablet daily (placebo or PMBL) for ten consecutive days/month, followed by a 20 day rest. The treatment was repeated for other two months and the follow up was carried out up to six months. Blood cell samples were collected at time 0 (before the beginning of the study), after three months and after six months.

Results: 22 patients were analyzed (15 males and 8 females). CD4⁺ and activated T cells increased significantly (p<0.0001) in treated group, while T reg were significantly reduced (p<0.0001). Transitional B cells (in particular T3) were recruited (p<0.0001) and associated to an increase of early naïve B cells; recruitment of early memory cells was associated to a reduction of "classic" memory B cells. Finally, NK cells were significantly (p<0.0001) increased in treated patients while their subpopulations remained unmodified.

Conclusion: PMBL administration is able to induce in COPD patients an important recruitment of cells belonging to the innate immune system, such as NK, a significant activation of early B cell compartments and a clear reduction of regulatory T cells associated to the increase of T cell activation. All these findings confirm that, in COPD patients, a specific (and also partially polyclonal) activation of B cells occurs, and this seems to be strictly related to the significant clinical results observed.

THE PREVALENCE AND IMPACT OF NIGHT-TIME SYMPTOMS IN COPD PATIENTS - RESULTS OF A CROSS-SECTIONAL STUDY IN FIVE EUROPEAN COUNTRIES**David Price, Mark Small, Gary Milligan***Centre of Academic Primary Care, Aberdeen; Adelphi Real World, Macclefield, UK*

Background: Poor sleep quality has been shown to be significantly associated with impaired health status across a variety of conditions. Little is known about the relative impact of day- and night-time symptoms in patients with chronic obstructive pulmonary disease (COPD).

Objectives: To investigate the prevalence and impact of night-time symptoms in COPD patients as reported by physicians and patients. Methods Data were drawn from a cross-sectional study of patients with COPD who were consulting their physician, undertaken in Europe in 2009. Analyses were conducted in approximately 1900 patients, excluding those with physician-reported sleep apnoea. Results were analysed using T-tests or Wilcoxon signed rank tests.

Results: Night-time disturbance was reported by 78.1% of COPD patients, as captured by the Jenkins Sleep Scale. Patients were more likely to report having a poor night's sleep (feeling tired and worn out in the past 4 weeks) than to report having problems with waking up and/or falling or staying asleep (p<0.001). The impact of COPD on sleep was scored as 4 or above on a 7-point Likert scale (1=no impact, 7=constant impact) in 33.4% of patients. Using the same scale, physicians