

P-1032 - INFLAMMATION AS A HYPOTHETIC MECHANISMS UNDERLYING DEPRESSION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

J.Rybka, M.Czajkowska-Malinowska, M.Nowak, D.Kupczyk, K.Kedziora-Kornatowska, M.Piskunowicz, J.Kedziora

¹Biochemistry Department, Nicolaus Copernicus University in Torun, ²Department of Lung Diseases and Respiratory Failure, Kujawsko-Pomorskie Pneumology Centre, ³Center of Psychoneurology in Elderly, Regional Palliative Care Centre - Sue Ryder's Home in Bydgoszcz, ⁴Department and Clinic of Geriatrics, Nicolaus Copernicus University in Torun, ⁵Department of Clinical Neuropsychology, Nicolaus Copernicus University in Torun, Bydgoszcz, Poland

Introduction: Depression is a highly prevalent comorbidity in patients suffering from chronic obstructive pulmonary disease (COPD). Both, depression and COPD are believed to be associated with inflammation. The aim of our study was to verify hypothesis that altered inflammatory response causes depression in patients with chronic obstructive pulmonary disease.

Material and methods: Blood was collected from 45 patients of whom 18 had COPD, 18 were depressed and 9 had COPD with comorbid depression. Total of 27 age and sex matched healthy controls were also included in the study. IL-2, IL-8 and IL-17A concentrations were assayed by ELISA technique in sera of all subjects.

Results: We observed significantly decreased concentration of IL-17A in a group of depressed patients (D) when compared with controls, 4.46 ± 0.573 pg/mL vs. 8.87 ± 1.182 pg/mL, respectively, $P=0.0005$. Increased concentration of IL-2 in depressed patients (D) as compared with controls, 3.00 ± 0.223 pg/mL vs. 2.30 ± 0.176 pg/mL, respectively, $P=0.013$ was also revealed. There was also increased concentration of IL-8 in COPD subjects if compared with controls and depression group, 4.55 ± 0.176 pg/mL vs. $3.71 \pm .132$ and 3.95 ± 0.118 pg/mL, respectively, $P=0.008$.

Conclusions: The results from our study suggest that there is significant difference between depression and COPDs with respect to IL-8 concentration also a lower concentration of IL-17A was noticeable in depressed patients ($P=0.06$). We need more data on depressed COPD patients to argue the role of inflammation on depression in COPD patients.