

SYSTEMIC INFLAMMATION MARKERS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

M. I. Gumeniuk, V. I. Ignatieva, Yu. A. Matviienko, I. F. Iliinska, G. S. Harchenko-Sevrukova

Abstract

Chronic obstructive pulmonary disease (COPD) is characterized by the presence of systemic inflammation, causing a significant defects of systemic immunity. Despite this fact there were no studies on immunological markers of systemic inflammation conducted yet.

The aim was to study the change of pro-inflammatory cytokines (IL-6, IL-1 β) and CRP levels in different groups of COPD patients.

We examined 63 patients with COPD (clinical groups B, C, D, stable disease phase) and 25 apparently healthy people 40 to 80 years of age using questionnaires, clinical, functional and immunological tests.

It was demonstrated that in COPD patients the change of IL-1 β , IL-6 and CRP level could either be associated with the disease itself or with the aging of the body. Hence, for accurate evaluation of these indices it was more suitable to use age-specific, rather than general normal ranges.

In patients with severe COPD (groups C and D) serum CRP value was 4-6 fold higher according to widely recognized normal range and 2-3,5 fold higher than in control group (similar by sex and age), whereas IL-1 β and IL-6 concentration was decreased. This finding testify for a transformation of inflammation in more severe cases.

It was revealed that the grade of systemic inflammation, measured by CRP level, changed by 1,5 times between groups B, C and D, reflecting a progression of disease and determining the need of individual approaches selecting a therapy.

Key words: chronic obstructive pulmonary disease, markers of systemic inflammation, C-reactive protein, cytokines.

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Mykola I. Gumeniuk,

SO "National institute of phthisiology and pulmonology named after F. G. Yanovskiy NAMS of Ukraine"

Doctor of medical science

10, M. Amosova str., 03680, Kyiv, Ukraine

Tel./fax: 380442756242, g@uf.ua