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Title: Cytokines and immunoglobulins for the prognosis of the work-related chronic bronchitis

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Body: Objective: Study aimed to assess cytokines and immunoglobulines for the prognosis of the work-related chronic bronchitis due to the occupational dust exposure. Methods: 63 patients with work-related chronic bronchitis were enrolled to the study. Control group included 20 healthy comparable male volunteers without occupational hazards. Serum IL-1 β , IL-6, IL-10, TNF- α , IgG, IgA, IgE, IgM values were measured. Spirometry and respiratory pressure measurements were analyzed. Results: TNF- α levels correlated with the body mass ($r=-0,39$, $p<0,05$), age ($r=-0,37$, $p<0,05$) and spirometry data - minute volume of respiration ($r=-0,51$, $p<0,01$) and respiratory volume ($r=-0,44$, $p<0,03$). IL-10 values were associated with the body mass ($r=-0,45$, $p<0,02$) and total protein level ($r=0,50$, $p<0,02$). IL-6, Ig A and Ig M levels revealed statistically significant correlation with the WBC counts - ($r=-0,67$, $p<0,01$; $r=0,59$, $p<0,03$; $r=0,51$, $p<0,05$ respectively). Ig A, E, G values correlated with the minute volume of respiration ($r=0,42$, $p<0,05$; $r=0,46$, $p<0,03$; $r=0,49$, $p<0,02$ respectively). Increased Ig M concentration was associated with the oxygen saturation at breath holding ($r=0,55$, $p<0,01$) and hyperventilation ($r=0,53$, $p<0,02$). Complement C3 values correlated with the SpO₂min at hyperventilation ($r=0,47$, $p=0,05$), C4 levels – with the total cholesterol values ($r=0,53$, $p<0,03$). Conclusion: cytokine and immunoglobulin levels could be useful for the prognosis of the work-related chronic bronchitis.