314. INTERLEUKIN-6 IN PATIENTS WITH SYSTEMIC SCLEROSIS: THE ASSOCIATION WITH LUNG INVOLVEMENT IN HIGH RESOLUTION COMPUTER TOMOGRAPHY, TYPE OF DISEASE, SELECTED INFLAMMATORY AND SEROLOGICAL PARAMETERS

Beata Trzcińska-Butkiewicz1, Katarzyna M. Fischer2, Anna Tyszka-Walerowicz3, Hanna Przepera-Bądzyk1 and Marek Brzosko1

1Department of Rheumatology and Internal Diseases, Pomeranian Medical University in Szczecin, Szczecin, 2Independent Laboratory of Rheumatologic Diagnostics, Pomeranian Medical University in Szczecin, Szczecin, Poland

Background: SSc is systemic CTDs, which is characterized by autoimmune disorders, disorders in microcirculation, inflammation and fibrosis of tissues and organs. It was proved that in pathogenesis of SSc are involved many cytokines, including IL-6. The aim of the study was to find association between concentration of IL-6 and the presence of pulmonary disorders confirmed in high resolution computer tomography (HRCT), which may be active (alveolitis) and inactive (without alveolitis), including type of the disease, the presence of markers of inflammation and abnormalities in serological parameters in patients with SSc.

Methods: The study was performed in 66 patients with SSC (age 21–74 years), diagnosed on the basis of ARA criteria. Patients were divided into two groups according to the type of the disease: with limited (lSSc) and diffuse skin involvement (dSSc). There were 30 healthy volunteers in the control group. In both groups were determined concentrations of IL-6 using R&D Systems tests. In patients with SSc were also performed ESR, CRP, fibrinogen, immunoglobulins of IgG, IgM and IgA classes, ANA, ScI-70, ACA and HRCT.

Results: As the abnormal values of IL-6 were considered concentrations > 2.5 pg/ml. We found significant difference in IL-6 concentrations between patients with SSc and the control group (P < 0.0007). The analysis within the patients group showed significantly higher concentrations of IL-6 in dSSc in comparison with lSSc (P < 0.0344). The comparison between patients with both active and inactive disorders in lung and patients without pulmonary changes showed increased risk of interstitial lung disease development in patients with high concentration of IL-6 (OR 4.73; 95% CI: 1.28, 17.52). The risk of alveolitis development was the greatest (OR 5.42; 95% CI: 1.22, 23.97). There was also association between high concentration of IL-6 and CRP (OR 4.66; 95% CI: 1.24, 17.45). We found no association with the rest of analysed inflammatory markers and autoantibodies.

Conclusion: There is significant association between high concentration of IL-6 and pulmonary disorders in the course of SSc. IL-6 as a proinflammatory factor might be early marker of ILD development in patients with SSc.

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