TRANSFORMING GROWTH FACTOR CONCENTRATIONS IN PATIENTS WITH SYSTEMIC SCLEROSIS AND ITS CORRELATION WITH THE PROCESS OF FIBROSIS IN THE COURSE OF THE DISEASE.

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Background: Systemic sclerosis is a connective tissue disease characterized by tissue fibrosis leading to interstitial lung disease. Transforming growth factor β (TGF-β) has been of interest as a potential marker used in diagnostics and prognosis and also as a drug target in systemic sclerosis.

The aim of this study was to analyze serum TGF-β1 concentrations in patients with systemic sclerosis and to evaluate the usefulness of this parameter in early diagnosis of the disease and prognosis of tissue fibrosis.

Methods: The study group included 30 patients, 5 men and 25 women diagnosed with systemic sclerosis (the average age of patients - 46.9 ± 12.8 years). The control group consisted of 19 women diagnosed with primary Raynaud's phenomenon (mean age 28.4 ± 7.8 years). TGF-β1 serum levels, chest imaging examinations, echocardiography, modified Rodnan Skin Score (mRSS) and statistical calculations were performed.

Results: The average concentration of TGF-β1 in the serum of patients with systemic sclerosis was 598.7 ± 242.6 pg/ml, whereas in the control group 568.4 ± 322.2 pg/ml - no statistically significant difference ($p = 0.378$). There was also no statistically significant dependence between TGF-β1 serum levels and the severity of pulmonary and skin fibrosis in systemic sclerosis.

Conclusion: TGF-β1 concentrations are not significantly different in patients with systemic sclerosis compared to patients with primary Raynaud's phenomenon and determination of TGF-β1 does not seem to be useful in the diagnosis of systemic sclerosis and as a marker of severity of tissue fibrosis.

Keywords: systemic sclerosis, rheumatology, interstitial lung disease, transforming growth factor β, tissue fibrosis