**Background:** Immunosuppressants (IS) are considered as a drug of choice for the treatment of interstitial lung disease (ILD) in the patients with systemic sclerosis (SSc). However, the IS use leads to rather limited and transient improvement of the pulmonary fibrosis. In this context the search for novel, more efficacious agents have been continued, such as attracting much attention rituximab (RTM).

**Objectives:** To compare the dynamics of pulmonary function parameters and skin fibrosis in patients with SSc associated with IS, who received RTM and IS for 3 years in real clinical practice.

**Methods:** 158 pts with the SSc-ILD were enrolled into the study. All pts received low- and moderate-dose glucocorticoids regimens. Group A (n=100) received IS's (31/31% myophenolate mofetil, 27/27% cyclophosphamide, 15/15% methotrexate; 27/27% other drugs; the patient's average age was 49.5±12.2 years, with female proportion 87%; SSc duration 8.6±7.2 years; diffused/localized forms 1/2.8). Group B (n=58) received RTM a total dose 3.0±1.2 g. 22 patients received RTM in combination with ISs (11/19% myophenolate mofetil, 11/19% cyclophosphamide; average age 48.0±13.2 years, female proportion 86%, SSc duration 6.4±4.9 years, diffused/localized forms 1/5.1). The therapy duration in both groups was 36 months. The time courses of forced vital capacity (FVC), diffusive lung capacity (DLC), modified skin count (mRss, points), activity index (EScSG, points), HAQ were assessed in female proportion 86%, SSc duration 6.4±4.9 years, diffused/localized forms 1/2.8).

**Results:** In Groups A and B the therapy was associated with significant decrease in mRss and stabilization of the diffusive lung capacity. During the follow-up period in Groups A no change of the other studied parameters was observed. In Groups B the therapy was associated with significant decrease in HAQ and EScSG. Evaluation of FVC time course in Group B revealed significant FVC increase with median increment about 5.6%. In Group B 10% FVC increase was found in the third of the patients thus exceeding respective parameter in Group B (16%). The patient percentage with FVC decrease by ≥10% in group B was less common compared to group A. During RTM therapy it was possible to significantly reduce the dose of glucocorticoids. RTM and immunosuppressants administration for 36 months in the patients with SSc and ILD effectively alleviated skin induration and stabilized DLCO.

**Conclusion:** Only RTM significantly improved FVC and the patient's quality of life and decreased of the activity index. RTM demonstrated a steroid-sparing effect. The study findings substantial potential use of RTM as a first-line agent for the treatment ILD progressive phenotype in SSc. The immunosuppressants use as a single-agent therapy is more preferable in patients with less pronounced ILD.

**Disclosure of Interests:** None declared

**Abbreviations:** SSc - systemic sclerosis, IS - immunosuppressants, FVC - forced vital capacity, DLC - diffusive lung capacity, CT - computed tomography, RTM - rituximab, SSc-ILD - systemic sclerosis and idiopathic interstitial lung disease, M - mean, SD - standard deviation, IQR - interquartile range, ACR - American College of Rheumatology, ESR - erythrocyte sedimentation rate, CRP - C-reactive protein, 6MWT - six-minute walk test, SHAQ - skin hardening activity, SCTC-DI - scleroderma clinical trials consortium damage index, A - agent, B - bisagent, P - p-value.

**AB0729**

**CLINICAL AND INSTRUMENTAL CHARACTERISTICS OF PATIENTS WITH SYSTEMIC SCLEROSIS IN DIFFERENT INTERVAL SEPARATED BY SCLERODERMA CLINICAL TRIALS CONSORTIUM DAMAGE INDEX (SCTC-DI) IN RUSSIAN COHORT PATIENTS.**

**Background:** Systemic sclerosis (SSc) is a complex disease having an incidence of 1-2 cases per 100,000. In SSc, inflammation leads to organ failure due to severe fibrosis of the skin and internal organs. At late stages, this disease is characterized by a profound decline in the quality of life and premature death [1]. The course of SSc is often one of progressive damage to multiple organs including the skin, joints, heart, lungs, gastrointestinal tract and kidneys. The scleroderma clinical trials consortium damage index (SCTC-DI) is a new instrument to quantify organ damage in systemic sclerosis [2].

**Objectives:** To use the scleroderma clinical trials consortium damage index (SCTC-DI) for pts with systemic sclerosis and highlight pts with different disease severity in Russian cohort patients.

**Methods:** Data from 96 patients with systemic sclerosis (mean age was 51.3±12.2; 63% have limited subset of the disease; 88% were female) all fulfilling the ACR criteria for SSc. Functional lung tests, high-resolution CT (HRCT), echocardiography, SSc activity (by the European Scleroderma Study Group (EScSG) activity index), HAQ, SHAQ, the six minute walk test (6MWMT), scleroderma clinical trials consortium damage index (SCTC-DI) were evaluated. Total scores of SCTC-DI were categorized into groups (low damage score=0, moderate damage score 6-12, high damage score ≥13). Other data collected including biological results (high-sensitivity C-reactive protein (hsCRP) and erythrocyte sedimentation rate (ESR)). Statistical analysis: descriptive data are presented as means (±SD) or medians (with interquartile range [IQR]) for continuous variables, while categorical variables are expressed as counts and percentages. Univariate comparisons were made with 2-sample t tests.

**Results:** pts were divided into 3 groups in depend on total score of SCTC-DI. 77pts were into group 1 (with low damage score); 17 pts (18%) were into group 2 (with moderate damage score) and 2 pts (2%) were into group 3 (with high damage score). Baseline characteristics of the groups are presented in Table 1.
**Methods:** levels and ILD progression in a cohort of SSc patients.

**Background:** Interstitial Lung Disease (ILD) is the major determinant of morbidity and mortality in patients with systemic sclerosis (SSc). The course of lung involvement is extremely variable in SSc-ILD. Squamous Cell Carcinoma Antigen (SCCA) is a glycoprotein initially isolated from cultured squamous carcinoma cells. It is increased in the sera of patients with systemic sclerosis (SSc) and we previously demonstrated that it is increased in patients with progressive ILD than with stable ILD.

**Objectives:** We aimed to investigate the association between SCCA-IgM serum levels and ILD progression in a cohort of SSc patients.

**Results:** Among the 97 SSc enrolled patients (mean age 55.4±12.5 yrs), 82 (84.5%) were female, 35 (36%) affected by diffuse cutaneous form of SSc (dcSSc) and 41 (42.3%) had ILD diagnosed by HRCT. The mean follow-up was 34.6 ± 16 months. SCCA-IgM serum levels was the only variable independently associated with ILD progression [HR 1.003 95% CI 1.000-1.006, p=0.02].

**Conclusion:** In conclusion, our preliminary data support SCCA-IgM as a potential candidate biomarker for progressive ILD in patients with scleroderma.

**REFERENCES:**

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**AB0730**

**THYROID DISORDERS ASSESSMENT: AN UNMET NEED IN PATIENTS WITH IDIOPATHIC INFLAMMATORY MYOPATHIES?**

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**Background:** Thyroid diseases (TD) might compromise health status of patients with inflammatory myopathies (IMs). We evaluated the association of TD with its possible impact on bone mineral density (BMD) and muscle function. The prevalences of Hashimoto thyroiditis (HT), multinodular goiter (MNG) and Graves’ disease (GD) in general population correspond respectively to about 12%, 10% and 1.3%; it is well known HT represents a risk factor for the development of thyroid papillary cancer (TPC). Idiopathic inflammatory myopathies (IMs) are rare systemic autoimmune disorders, with a pleiotropic clinical picture. TD are a known comorbidity of patients with connective tissue diseases; in particular, they might increase the risk of osteoporosis (OP) and fragility fractures (FF) in patients with SLE.

**Objectives:** To evaluate the prevalence of TD in a monocentric cohort of patients with IMs, exploring possible correlations with serology, organ involvement and comorbidities.

**Methods:** We retrospectively analyzed medical records of consecutive patients diagnosed with SLE according to the American College of Rheumatology (ACR) criteria and regularly followed at our specialist outpatient Myositis Clinic from January 2018 to December 2021. We collected data about demographic, subset and duration of disease, organ involvement, serology, thyroid dysfunction and other comorbidities. As TD, we took into account the occurrence of HT, MNG and GD. Intergroup comparisons were assessed by using Chi-square, t-test and ANOVA. P values <0.05 were considered significant.

**Results:** The clinical charts of 151 patients were examined: 101 (66.9%) were female, the mean age was 65.1±14.0 years and the mean disease duration was 8.5±6.5 years. Clinical diagnosis were the following: 69 (45.7%) polymyositis, 59 (39.1%) dermatomyositis, 11 (7.3%) clinically amyopathic dermatomyositis, 10 (6.6%) inclusion body myositis, 2 (1.3%) juvenile dermatomyositis. Seventy-five patients (49.7%) had a TD; in particular, 39/151 (25.8%) had MNG, 34/151 (22.6%) had HT and 2/151 (1.3%) GD. The presence of a TD was significantly related with esophagus involvement (p=0.037), Raynaud’s phenomenon (RP) (p=0.045), sicca syndrome (Sis) (p<0.001), OP (p<0.001) and cataract (p=0.017). In particular, HT and MNG occurrence was respectively associated with a higher risk of OP (p<0.001) and of sicca syndrome (p<0.001). Interestingly TD were significantly less frequent in patients with anti-M2beta autoantibodies (p=0.003) and anti-Jo1 autoantibodies (p=0.026). No further significant correlations emerged.

**Conclusion:** Our study showed nearly half of our IMs patients had a TD, with a prevalence of both MNG and HT significantly higher than in general population; besides, owing to the retrospective nature of our study, these data could be underestimated. In addition to correlating with RP and Sis, TD showed a significant association with esophagus involvement; this result should be confirmed and clarified with future analyses. Moreover, in our cohort, TD were confirmed as a risk factor for a compromised BMD; in particular, HT was significantly associated with the occurrence of OP. Further studies are needed to corroborate our data in other cohorts of IMs patients.

**REFERENCES:**

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