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POS0853

DECREASE IN ANTI-TOPOISOMERASE-1 ANTIBODY TITER IN PATIENTS WITH SYSTEMIC SCLEROSIS DURING LONG-TERM RITUXIMAB THERAPY

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Background: Rituximab (RTX) is a new option in the treatment of systemic sclerosis (SSc) [1]. There is not enough data on changes in the level of autoantibodies and their clinical significance during RTM therapy. There are only a few reports on the higher efficiency of RTX in patients (pts) with SSc positive for anti-topoisomerase-1 antibodies (a-Topo-1), therefore the study of this issue might be interested.

Objectives: To compare clinical parameters and B-lymphocytes (B-lymph) level in SSc pts depending on the presence or absence of a-Topo-1 during RTX therapy with prospective long-term follow-up.

Methods: This study included 88 pts with SSc. The mean follow-up period was 26,3±10,7 months. The mean age was 47years (17-71), female-73 pts (83%), the diffuse cutaneous subset of the disease had 50 pts (57%). Symptoms of the interstitial lung disease (ILD) were observed in 70 pts (80%). The mean disease duration was 5,9±4,8 years. The cumulative mean dose of RTX was 2,9±1,1 grams. All patients received prednisone at a dose of 11,7±4,4 mg, immunosuppressants received 42% of them. There were 63 pts positive for a-Topo-1 and 25 pts - negative. The pts of the compared groups did not differ in the main demographic and clinical parameters, excepting lung involvement. In a-Topo-1 positive group 55 (87%) pts had ILD and only 15 (60%) – in a-Topo-1-negative group (p=0,02). The results at baseline and at the end of the follow up are presented in the form of mean values and changes in parameters (delta).

Results: Considering the entire cohort, an improvement of almost all outcome parameters was found. When a-Topo-1 positive and a-Topo-1-negative pts were analyzed separately, we observed a significantly higher decrease in the activity score, depletion of B-lymph, an increase in forced vital capacity (FVC) and diffusion capacity for carbon monoxide (DLCO) in a-Topo-1 positive group of pts (table 1).

Table 1. Changes of the main outcome parameters depending on the presence of a-Topo-1 on RTX therapy.

Parameters	a-Topo-1 positive pts	a-Topo-1 negative pts	P
Delta Activity score (EScSG-AI)	1,79	0,9	0,001
Delta Rodnan skin score (mRSS)	4,9	5,2	NS
Delta B-lymphocytes (absolute count)	0,212	0,193	0,001
Delta FVC*, %	8,64	6,46	0,001
Delta DLCO**, %	2,86	0,032	0,001

*FVC - forced vital capacity % predicted, **DLCO - diffusion capacity for carbon monoxide % predicted

The a-Topo-1 level decreased from 174,2±50,1 to 148,1±66,1 units/ml (p=0,0009). In this group, a-Topo-1 became negative in 5 pts (7,9%). The disappearance of a-Topo-1 positivity was accompanied by a more pronounced decrease in mRSS (delta mRSS=7,4) and a higher depletion of B-lymph. There was a higher cumulative dose of RTX (4±1,4grams) in this 5 pts compared with the pts who sustained a-Topo-1 positivity. There was a moderate negative statistically significant correlation between the a-Topo-1 and the total dose of RTX (r=-0,298, p=0,017). A moderate negative statistically significant correlation was found between the a-Topo-1 and FVC (r=-0,322, p=0,009).

Conclusion: In our study, the a-Topo-1 level significantly decreased during RTX therapy in Russian pts. The decrease in a-Topo-1 titers correlated with the total dose of RTX and was accompanied by a decrease in mRSS, disease activity index and an increase in FVC and DLCO. A higher efficacy of RTX in the a-Topo-1 positive group with prevalence of ILD was revealed, therefore a-Topo-1 positivity could be considered as a predictor of a better response to RTX therapy.

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POS0854

SEX DIFFERENCES IN SYSTEMIC SCLEROSIS PATIENTS IN A SINGLE CENTER IN EASTERN EUROPE

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Background: The low overall prevalence of systemic sclerosis (SSc) and the low proportion of male patients have resulted in a scarcity of studies assessing sex differences in SSc patients, and contradictory results have often been observed. **Objectives:** The aim of the study was to assess differences in disease manifestations in a cohort of SSc patients according to gender.

Methods: We performed a retrospective observational study using data extract from the EULAR scleroderma trials and research (EUSTAR) cohort 096. We looked at sex influence on disease characteristics at baseline and then focused on patients with at least 2 years of follow-up to estimate the effects of sex on disease progression and survival.

Results: 173 patients with SSc were available for the baseline analyses. Males were older (52,96 vs 45,88, p=0.009), were more likely to smoke (73% vs 7%, p<0.001), had more frequent diffuse skin involvement (73,1% vs 56,5%, p<0.01), higher modified Rodnan skin score (34,61% vs 17%, p=0.01) and activity score (84,62% vs 46,26%, p<0.001) and were more often associated with positive acute phase reactants (65,38% vs 38,77%, p=0.01). Severe interstitial lung disease was more common in males (59,09% vs 27,53%, p=0.003), also the presence of tendon friction rubs was more frequent in this sex group (23,07% vs 8,84%, p=0.032).

In the longitudinal analysis after a mean follow-up of 3,5(±0,65) years, male sex was associated with a higher risk of scleroderma renal crisis (OR:9.45 (1.49 to 59.69); p=0.004), digital contractures (OR:8,2 (3,1 to 21,9); p<0,001), arrhythmias (OR:3,37 (1,36 to 8,34); p=0.006), pulmonary fibrosis (OR: 3.56, (1.51 to 8.41); p=0.003), pulmonary hypertension (OR: 3.01 (1.19 to 7,59); p=0.016), severe vascular involvement (OR:2,86, (1,22 to 6,73); p=0.013) and low ventricular ejection fraction (OR: 2,84, (1,2 to 6,73); p=0.014). Males had significantly reduced survival time after diagnosis (p=0,004). The most frequent causes of death were scleroderma renal crisis in males and pulmonary hypertension in females.

Conclusion: Although more common in women, SSc appears as strikingly more severe in men. Our results demonstrate a higher risk of severe organ involvement and poor prognosis in men. These results raise the point of including sex in the management and the decision-making process.

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POS0855

PATIENT PREFERENCES, TRADE-OFFS AND ACCEPTABLE RISKS IN THE TREATMENT OF SYSTEMIC SCLEROSIS-ASSOCIATED INTERSTITIAL LUNG DISEASE: A STEP TOWARDS SHARED DECISION-MAKING

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