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AB0732 EFFICACY AND SAFETY OF RITUXIMAB IN SYSTEMIC SCLEROSIS: FRENCH RETROSPECTIVE STUDY AND LITERATURE REVIEW

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Background: Interstitial lung disease occurs in 42% of diffuse SSc patients and have a major impact on the overall survival.¹ Cyclophosphamide and mycophenolate mofetil can allow the lung disease stabilisation.^{2,3} Recently several case-reports and little series reported the efficacy of rituximab in SSc, showing a possible improvement of pulmonary involvements.^{4,5,6} Large studies are lacking to determine the factors associated with rituximab response, the maintenance regimen and the long term efficacy of rituximab in SSc.

Objectives: To describe safety and efficacy of rituximab in patients with systemic sclerosis.

Methods: We included 13 patients with systemic sclerosis treated with rituximab and pooled with 40 additional patients from the literature. SSc rituximab untreated patients were matched to rituximab treated ones.

Results: Thirteen patients who received rituximab and 26 rituximab-untreated patients were included. In comparison to 26 patients who did not received rituximab, FVC changes were not significantly different, whereas DLCO improved in 13 patients who received rituximab (0 [-4; 4] vs loss of -7 [-19; 0]; p=0.05). Considering 7 rituximab treated and 14 untreated diffuse SSc, FVC was improved during the 24¹²; 46 months of follow up in dSSc who received rituximab (gain of 12 [7.5;14]% vs loss of 1.5 [-16.8; 2.5]; (p=0.003). Pooled analysis of 53 patients (40 literature patients and 13 from personal series) showed significant improvement of median mRSS from 18⁸; 32 at baseline to 9⁴; 18 at M6 (p=0.007), 13⁸; 18 at M12 (p=0.008) and 10⁴; 16 at the last follow-up (p=0.0002). FVC increased from 71%⁶⁶; 80 at baseline to 84%⁷⁵; 90 at M12 (p=0.001). DLCO increased from 58%³⁹; 65 at M0% to 63%⁵³; 78 at M12 (p=0.04).

Conclusions: Our personal data and pooled literature analysis suggest the efficacy of rituximab in the subset of diffuse SSc in particular in skin and interstitial disease involvements. The safety of rituximab seems to be reasonable and similar to previous data in other autoimmune diseases.

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AB0733 ASSOCIATION OF HAEMATOLOGICAL PARAMETERS WITH DISEASE MANIFESTATIONS, ACTIVITY, AND SEVERITY IN PATIENTS WITH SYSTEMIC SCLEROSIS

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Background: Neutrophil-to-lymphocyte ratio (NLR), monocyte-to-lymphocyte ratio (MLR), eosinophil-to-lymphocyte ratio (ELR), basophil-to-lymphocyte ratio (BLR), and mean platelet volume (MPV) may potentially reflect inflammatory status in systemic autoimmune diseases.

Objectives: The aim of this study is to investigate the association of NLR, MLR, ELR, BLR and MPV with disease manifestations, activity and severity in patients with systemic sclerosis (SSc).

Methods: 59 patients with SSc and 50 healthy controls were included in the study. All patients were diagnosed according to the 2013 ACR/EULAR systemic sclerosis classification criteria. Adult patients with SSc and healthy controls were compared in terms of NLR, MLR, ELR, BLR and MPV.

Results: SSc and control groups had similar ages and genders. Lymphocyte number was lower in SSc group compared to controls (p<0.001). SSc group also have higher NLR and MLR (table 1). There were no significant differences in ELR and BLR ratios between SSc patients and controls. Patients with active disease (2.9 [IQR 2.13], p=0.042), pulmonary hypertension (PHT), digital ulcers, and tendon friction rubs (TFR) had higher NLRs (table 2). MLR was also higher in dcSSc patients (0.28 [IQR 0.73]) compared to lcSSc (0.2 [IQR 0.48]) (p=0.045), and there were also significant associations with disease manifestations like digital ulcers, tendon friction rubs (table 2). MLR was positively correlated with mRSS (rho=0.35 p=0.009), Valentini (rho=0.453 p=0.001) and Medsger (rho=0.283 p=0.036) scores. According to capillaroscopy images, patients with late stage findings had higher MLRs compared to patients with normal findings (0.27 [IQR 0.3] vs 0.15 [IQR 0.04], p<0.001). Patients with digital ulcers (p=0.02) and arthritis (p=0.013) had higher ELRs and patients with tendon friction rubs has higher ELRs (p=0.014) and BLRs (0.036) compared to those without. There was no significant relation between MPV and disease manifestations (table 2). There were no relationships between dysmotility and haematological parameters.

Abstract AB0733 – Table 1. Comparison of laboratory features of disease and control groups

	SSc n=59	Control n=50	p value
Neutrophil*	4.13 (11.88)	3.57 (5.19)	0.150
Lymphocyte*	1.67 (3.04)	2.08 (2.75)	<0.001
Monocyte*	0.34 (1.21)	0.35 (0.73)	0.959
CRP, mg/L	2.3 (29.9)	1.2 (8.1)	0.031
ESR, mm/hour	19 (58)	13 (30)	0.092
MPV, fl	9 (4.8)	8.7 (5.3)	0.557
NLR	2.47 (7.82)	1.73 (2.29)	<0.001
MLR	0.20 (0.79)	0.16 (0.34)	<0.001

* x10⁹/L (IQR)

Abstract AB0733 – Table 2. Association of disease manifestations with NLR, MLR and MPV

	n=59*	MPV	NLR	MLR
ILD	+ (n=17) - (n=42) P	8.9 (2.8) 9 (4.8) 0.412	2.71 (7.82) 2.43 (3.92) 0.431	0.21 (0.77) 0.2 (0.32) 0.738
PHT	+(n=3) - (n=56) P	9.2 (1.3) 9 (4.8) 0.856	3.2 (1.78) 2.43 (7.82) 0.044	0.26 (0.11) 0.2 (0.82) 0.276
Digital Ulcer	+(n=12) - (n=47) P	9.1 (3.4) 8.9 (4.8) 0.971	2.75 (3.05) 2.43 (4.31) 0.049	0.27 (0.74) 0.19 (0.48) 0.009
TFR	+(n=5) - (n=54) p	9.1 (1.6) 9 (4.8) 0.911	3.62 (1.26) 2.41 (4.31) 0.003	0.28 (0.27) 0.2 (0.48) 0.030

MPV, NLR and MLR are given as medians (interquartile ranges).+and – denote presence and absence, respectively.

Conclusions: According to our study, as NLR and MLR are simple, practical, cost-effective markers, they can used for evaluation of disease manifestations, activity and severity in SSc.

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