Conclusions: The average incidence of SSc in this population-based US cohort was 2.7 per 1 00 000 population with no change in incidence over the 36 year period of study. The new 2013 classification criteria perform significantly better than the 1980 criteria, but failed to classify 19% of patients in this cohort. Overall survival of patients with SSc is worse than the general population with no evidence of improved survival over time, indicating an unmet need for early diagnosis and more aggressive management.

Disclosure of Interest: None declared

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SAT0477 INTENSIFIED B-CELL DEPLETION THERAPY IN PROGRESSIVE SYSTEMIC SCLEROSIS PATIENTS: 24 MONTHS FOLLOW-UP

D. Rossi, I. Cecchi, S. Sciascia, M. Radin, E. Rubini, D. Roccatello. *Center of Immunopathology and Rare Diseases, University of Torino, Torino, Italy*

Background: Systemic sclerosis (SSc) is a connective tissue autoimmune disease with systemic involvement and a serious medical condition with a high rate of mortality, especially due to interstitial lung disease (ILD). The exact pathophysiology is still unclear, but B cells seem to play a crucial role in the initiation and the progression of the disorder.¹ Therefore, the use of Rituximab (RTX) might have a rational in the treatment of SSc.

Objectives: We aimed to investigate the outcomes of SSc patients treated with RTX after a follow-up of 24 months.

Methods: We retrospectively collected data from SSc patients² resistant or intolerant to previous therapies, treated with intensified B-depletion therapy, between 2013 and 2016. Therapeutic protocol comprehends: RTX 375 mg/sm on days 1, 8, 15, 22, and two more doses after one and two months, associated with two intravenous administrations of 10 mg/kg of cyclophosphamide and three methylprednisolone pulses (15 mg/kg) followed by oral prednisone (0.8 mg/kg/day, rapidly tapered to 5 mg/day by the end of the 3rd month after RTX).

Results: The study included 20 SSc patients (18 females and 2 males; mean age 66.7±11.0 years). Patients presented with severe multiorgan involvement: ILD (19/20, 95%), pulmonary hypertension (12/20, 60%), and skin thickening (17/20, 85%). After a follow-up of 24 months, we observed a decrease in the levels of NT-proBNP (mean baseline: 385.4±517, mean at 24 months: 283±648, $p<0.05$), and in the Modified Rodnan Skin Score (mRSS) (mean mRSS baseline: 14.4±10.5, mean after 24 months of follow-up: 12.9±10, $p<0.05$). Four out of 19 (21%) patients experienced a significant improvement of ILD, as assessed by high-resolution computed tomography, while in 12/19 (63%) patients the intensified B-cell depletion therapy was associated with a stabilisation of the imaging features with no sign of progression. Three out of 19 (16%) patients showed a deterioration of the ILD.

Patients showed no significant decrease in forced vital capacity (FVC) (mean baseline FVC: 93.6±19.3, mean after 24 months of follow-up: 92.2±23.3), no significant decrease in forced expiratory volume in one second (FEV1) (mean baseline FEV1: 89.5±15.6, mean FEV1 at 24 months: 87±21.2), no significant decrease in diffusing capacity (DLCO) (mean baseline DLCO values: 58.8±8.6, mean at 24 months: 60.3±14), no significant change in the ejection fraction (EF)

(mean baseline EF values: 62.8±6.4, mean EF values at 24 months: 58.6±7.1) and in pulmonary artery pressure (PAP) (mean baseline PAP: 30.2±10.5, mean at 24 months: 31.1±11.05).

Conclusions: Despite recent advances in the treatment of SSc, ILD heavily affects prognosis and life expectancy of these patients. Our data suggest that the intensified B-depletion therapy protocol might represent a promising tool for the management of SSc in terms of controlling the progression of the disease, especially when considering pulmonary and skin manifestations. Further prospective studies are needed in order to confirm our results.

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SAT0478 DISEASE-SPECIFIC AUTOANTIBODIES ASSOCIATE WITH REMARKABLY DIFFERENT RISK OF DEVELOPMENT OF SIGNIFICANT LUNG FIBROSIS IN SYSTEMIC SCLEROSIS

A. Sarı, S.I. Nihtyanova, A. Gill, V.H. Ong, C.P. Denton. *Rheumatology, Royal Free Hospital, University College London, London, UK*

Background: Pulmonary fibrosis (PF) is an important complication of systemic sclerosis (SSc), being a leading cause of disease related death. Some studies suggest that the timing of PF development differs between patients with different autoantibodies.

Objectives: We set out to assess a large single-centre SSc cohort, focusing on the timing of clinically significant PF (csPF), and to compare this within subgroups with different disease-specific autoantibodies, in particular anti-centromere antibody (ACA), anti-topoisomerase I antibody (ATA) and anti-RNA polymerase antibody (ARA).

Methods: Patients with confirmed SSc and information on autoantibodies were included. PF was confirmed on high-resolution CT and defined as clinically significant based on at least one of the following: FVC <70%; a drop in FVC >15%; DLCO <70% with no pulmonary hypertension (PH) present; or a drop in DLCO >15% with no PH. Only subjects who had first available lung function test result within the first 3 years from onset were included. 1-Kaplan-Meier (1 KM) estimation was used to calculate cumulative incidence of csPF. To assess the timing of highest rates of csPF development, hazard rates were calculated within intervals of 12 months over the follow-up.

Results: A total of 450 subjects, 75 (16.7%) male, mean age of onset 47.4 years, were included in the study. Of those 225 (50%) had diffuse cutaneous SSc, 105 (23.3%) carried ACA, 113 (25.1%) ATA and 72 (16%) ARA. Mean follow-up was 12 years, interquartile range 8–16 years. Over the entire follow-up period, 196 (43.6%) of the subjects developed csPF.

Using 1 KM estimation, for the whole cohort, over the first 20 years of disease, approximately half of the patients developed csPF. Three quarters of the patients who developed csPF had reached this endpoint by 5 years (38.2%) with much lower incidence thereafter (at year 10, 15 and 20%–43%, 47% and 49.6%, respectively).

Analysis within subgroups showed that, ACA was associated with a very low risk of csPF development (cumulative incidence of 5.9%, 8.1%, 9.8% at 5, 10 and 15 years from SSc onset). On the other hand, ATA +patients had a remarkably high risk of csPF development, which ultimately occurred in the majority of cases, with cumulative incidence of 77.6% at 5 years, 82.7% at 10 years and 87.1% at 15 years. Rates of csPF development among ARA+patients were higher than those in ACA+, but still much lower than ATA+, and even after 20 years of follow-up, the cumulative incidence of csPF among them was less than a half of that among ATA+patients (23.7%, 33% and 41% at years 5, 10 and 15, figure 1).

The hazard of csPF among ACA+patients was highest in the second year from SSc onset (3%) and in the subsequent years varied between 0% and 1.8%. On the other hand, among ATA+patients hazard of csPF was 28.3% in year 1, 44.9% in year 2, peaked at 52.5% in year 3 and went down sharply thereafter. Although hazard was much lower among ARA+patients, this still peaked at year 3 (2.8%, 6.1% and 12.1% at year 1, 2 and 3 respectively) and declined after.