

the disease were noted. Also the social difficulties due to fingerprint abnormalities were noted. Healthy controls with no RP were included for comparison.

**Results:** 40 consecutive patients with RP attending Rheumatology outpatient services of our institute were screened for FP abnormalities. 29 with SSc [20-DcSSc, 9-LcSSc], 8 with overlap syndromes and 1 each of SLE, Undifferentiated Vasculitis and Undifferentiated CTD. It was noted prior to screening that 19 patients experienced some difficulty in the past with biometric recognition of their FPs at various times. On screening with biometric scanner, 15 of 40 [37.5%] had FP abnormalities in the form of non recognition of at least one finger with a median of 2 [range 1–6 fingers]. Of these 15, seven had DcSSc, six had LcSSc and two with overlap syndromes. The mean NFIQ score of these 15 patients was 4.5 [poor] and the mean NFIQ scores in SSc was 3.8. Eleven [27.5%] patients could not get government Identity cards based of FP scanning, four could not avail various government benefit schemes which needed their fingerprints as identity. Sixteen [40%] had history of digital vasculopathy in the form of digital pits, digital ischemia or ulcers. PAH was found in one and eight had Interstitial lung disease. Among the 10 controls all FPs were recognized and the mean NFIQ score was 2.2 indicating a better quality of FPs.

**Conclusions:** Fingerprint abnormalities occur frequently in patients with systemic sclerosis causing social disabilities in few. The quality of FPs in SSc patients is poor. Raynaud's phenomenon and vasculopathy are frequently associated. Documentation of this abnormality should allow the use of other biometric tools for personal identification.

#### References:

[1] E. Tabassi, C. Wilson, C. Watson, "Fingerprint Image Quality", NIST Internal Report 7151, National Institute for Standards and Technology, 2004.

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### AB0645 LYMPHOCYTE SUBSETS T, B AND NK CELLS IN SYSTEMIC SCLEROSIS

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**Background:** Systemic sclerosis (SSc) is a rare multisystem disease with underlying immune mechanisms, whose pathogenesis remains unclear. Few previous reports have evaluated lymphocyte subpopulations in SSc and your results are conflicting.

**Objectives:** The present study aimed to analyze the lymphocyte subsets in SSc patients in comparison to healthy individuals.

**Methods:** Peripheral blood (PB) samples to analyze lymphocyte subsets were obtained from a non-random convenience sample of 20 SSc patients. Twenty healthy individuals recruited from the blood bank were used as sex and age-matched controls. Blood samples were analyzed by flow cytometry for total T cells, CD4+ and CD8+ T cells subsets, CD19+ B cells and total NK cells. Statistical analyses were performed using the IBM Statistical Package for Social Sciences (SPSS 18.0). Data are expressed as mean  $\pm$  SD and median and range. Non-parametric Mann-Whitney U test was used for analyses of the flow cytometry. A probability  $p < 0.05$  was considered statistically significant.

**Results:** The mean (SD) age of SSc patients was 57.9 (14.2) years, 95% were female and 31.6% presented diffuse cutaneous SSc (dcSSc). Patients presented a lower mean total lymphocyte count compared to healthy controls (23.7% vs. 29.6%,  $p = 0.026$ ) (Table 1.). No statistically significant differences were found in the percentages or the absolute numbers of T, B or NK cells.

		Patients	Controls	$p^a$
Leukocytes		8.02 $\pm$ 1.51	6.79 $\pm$ 3.39	0.108
Lymphocytes	%	23.53 $\pm$ 14.06	29.97 $\pm$ 15.08	0.026*
CD45	Absolute	1.70 $\pm$ 1.59	2.06 $\pm$ 0.03	0.512
	%	99.79 $\pm$ 0.11	99.71 $\pm$ 0.11	0.165
CD3	%	71.20 $\pm$ 3.57	75.11 $\pm$ 1.79	0.398
	Absolute	1.35 $\pm$ 1.20	1.60 $\pm$ 0.07	0.478
CD4	%	48.59 $\pm$ 4.09	47.76 $\pm$ 8.78	0.289
	Absolute	0.85 $\pm$ 0.94	0.99 $\pm$ 0.12	0.620
CD8	%	25.10 $\pm$ 0.04	28.38 $\pm$ 1.19	0.277
	Absolute	0.48 $\pm$ 0.29	0.51 $\pm$ 0.03	0.301
CD19	%	8.89 $\pm$ 11.57	10.44 $\pm$ 2.07	0.478
	Absolute	0.20 $\pm$ 0.02	0.17 $\pm$ 0.03	0.512
NK	%	6.73 $\pm$ 8.39	6.71 $\pm$ 5.40	0.883
	Absolute	0.14 $\pm$ 0.35	0.14 $\pm$ 0.09	0.947
Ratio	T/B	8.54 $\pm$ 4.11	7.31 $\pm$ 2.3	0.383
	CD4/CD8	1.93 $\pm$ 0.23	1.73 $\pm$ 0.33	0.157

**Conclusions:** Our data support previous reports indicating that depletion of lymphocyte in the PB of SSc patients. However, we found no significant difference in relation to lymphocyte subtypes, which differs from the literature data.

#### References:

[1] T and NK Cell Phenotypic Abnormalities in Systemic Sclerosis: a Cohort Study and a Comprehensive Literature Review. Almeida et al, 2015.

[2] Liu M, Wu W, Sun X, Yang J, Xu J, Fu W, Li M. New insights into CD4+ T cell abnormalities in systemic sclerosis. Cytokine & Growth Factor Reviews, 2016; 28:31–36.

[3] Gambichler T, Tigges C, Burkert B, Höxtermann S, Altmeyer P, Kreuter A.

Absolute count of T and B lymphocyte subsets is decreased in systemic sclerosis. Eur J Med Res 2010; 15:44–46.

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### AB0646 DETERMINANTS OF QUALITY OF LIFE IN SYSTEMIC SCLEROSIS AND PATIENT'S PERCEPTION OF THEIR ILLNESS

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**Background:** Systemic sclerosis (SSc) is a chronic multi-system autoimmune disease associated with disability and reduced quality of life.

**Objectives:** The purpose of this study was to assess health-related quality of life and disease perception in a group of SSc patients.

**Methods:** We performed a case-control study on 50 SSc patients from EUSTAR cohort 096. Socio-demographic data, disease characteristics and self-assessment questionnaires: Health assessment questionnaire (HAQ), EuroQol-5D (EQ5D) and the Brief Illness Perception Questionnaire were collected.

**Results:** The group included 41 females, 31 limited SSc subsets.

Medium HAQ value was 0.9 (0.6). Patients with higher Rodnan score ( $p = 0.002$ ), synovitis ( $p = 0.02$ ), late capillaroscopic pattern ( $p = 0.02$ ), muscle weakness ( $p = 0.001$ ), gastrointestinal involvement ( $p = 0.01$ ) and those on immunosuppressants ( $p = 0.02$ ) have a poor life quality.

According to EQ-5D, the quality of life was related to specific organ involvement. 48% of the patients had some mobility problems, 6% were confined to bed; mobility was influenced by lung involvement ( $p = 0.008$ ), digital ulcers ( $p = 0.03$ ) and Medsger score ( $p = 0.01$ ). 48% of the patients had some self-care problems and 8% were not able to wash/dry themselves; self-care was influenced by the Rodnan score ( $p = 0.02$ ), diffuse subset ( $p = 0.02$ ), muscle weakness ( $p = 0.03$ ) and gastrointestinal involvement ( $p = 0.021$ ). 64% of the patients had some problems in performing usual activities and 16% were not able to perform them; the performance was influenced by disease subset ( $p = 0.01$ ), Medsger score ( $p = 0.02$ ), cardiac involvement ( $p = 0.02$ ) and the use of immunosuppressants ( $p = 0.01$ ). 52% of the patients had some and 38% had extreme pain/discomfort; 66% of the patients were moderately and 20% were extremely anxious/depressed. Both were related to digital ulcers ( $p = 0.01$ , respectively  $p = 0.045$ ).

The illness had a great impact on patients life 7.3 (2.5)/10. The main determinant was pulmonary fibrosis ( $p = 0.04$ ). The patients consider that their disease will continue for quite a long time 8.7 (2.6)/10. Most of the patients do not feel to have a good control on their disease 6.3 (3.3)/10 and unfortunately they do not think that the treatment is very helpful 7.9 (2.7)/10. The intensity of the symptoms is quite severe 7.5 (2.7)/10, related to digital ulcers ( $p = 0.04$ ) and gastrointestinal involvement ( $p = 0.02$ ). Patients are very concerned about their disease 9.1 (2.3)/10, most of them being emotionally affected 7.6 (2.6).

**Conclusions:** This study confirms the presence and magnitude of impaired life quality in patients with SSc with impact on mobility, self-care, usual activities. The major determinants were the extend of skin involvement, musculoarticular, gastrointestinal involvement and digital ulcers. Often patients are anxious/depressed, had a high pain intensity and the perception of this illness is pessimistic.

#### References:

[1] Hudson M, Canadian Scleroderma Research Group Health-related quality of life in systemic sclerosis: a systematic review. Arthritis Rheum. 2009;61(8):1112–2.

[2] Frantz C et al. Impaired quality of life in systemic sclerosis and patient perception of the disease: A large international survey. Semin Arthritis Rheum. 2016;46(1):115–23.

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### AB0647 DIAGNOSIS OF SYSTEMIC SCLEROSIS – “A TANGLED STORY”

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**Background:** Proper diagnosis of scleroderma is often long and difficult, since it is such a rare disease, and one which few doctors or patients are familiar with.

**Objectives:** To establish the interval between the symptoms' onset of systemic sclerosis (SSc) and what type of investigations are performed until the patients reach the final diagnosis of a rheumatologist

**Methods:** This is a cross-sectional study that included randomly selected patients with a diagnosis of SSc which were evaluated based on a questionnaire about symptoms at onset, specific consults and investigations. Descriptive statistics were used.

**Results:** The study group included 47 patients, of which only 5 were males and 17 from rural areas. The medium age was 53 (14.4) years.