Conclusions: Fatigue, depression and anxiety have a greater influence on QoL in SLE than disease activity and damage. Of these, fatigue appears to be the most important variable which influences QoL.

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AB0555 IS HIGHER FITNESS ASSOCIATED WITH BETTER HEALTH-RELATED QUALITY OF LIFE IN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS?

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Background: Patients with systemic lupus erythematosus (SLE) present reduced health-related quality of life (HRQoL).¹ As an adjunct to traditional medical therapy, higher levels of physical fitness seem to be associated with better symptomatology and HRQoL.² However, a comprehensive characterisation of the association of different components of physical fitness with the different dimensions of HRQoL in this population is lacking and would provide valuable information for the design of prospective studies.

Objectives: The aim of this study was to investigate the association of different physical fitness components (flexibility, muscle strength and cardiorespiratory fitness (CRF) with the dimensions of HRQoL.

Methods: This cross-sectional study included a total of 70 women with SLE (age 42.5; SD 13.9). The back scratch test, 30 s chair stand test and 6 min walk test (n=49) (from the Senior Fitness Test battery) as well as the handgrip strength test were used to assess physical fitness. The median value of each fitness test [flexibility (0.125 cm), upper muscle strength (24.2 kg), lower muscle strength (15 repetitions) and CRF (575 metres)] was used to consider high ($\geq$ median value) or low ($<$ median value) fitness. HRQoL was assessed through the 36-item Short-Form Health Survey (SF-36). Partial correlation was used to examine the association of physical fitness components with all dimensions of the SF-36. For those dimensions significantly associated with fitness, analyses of covariance compared the differences in HRQoL between patients with low and high fitness level. All analyses were controlled for age, body mass index, depression and fatigue.

Results: Flexibility was correlated with physical function, social functioning and physical component (r_{partial} between -0.26 and 0.28 ; all, $p < 0.05$). Patients with a high level of flexibility only presented better physical function than those with a low level ($p = 0.03$). Upper and lower muscle strength were correlated with physical function, physical role, bodily pain and physical component (r_{partial} between 0.28 and 0.50 ; all, $p < 0.05$) with differences between groups of low and high muscle strength (upper and lower body) in all those dimensions ($p < 0.05$). CRF was correlated with physical function, bodily pain and physical component (r_{partial} between 0.39 and 0.65 ; all $p < 0.01$), with differences in physical function and physical component between groups of low and high CRF ($p < 0.05$).

Conclusions: The main findings of the present study suggest that flexibility, muscular strength and cardiorespiratory fitness are associated with different dimensions of HRQoL, particularly with those related to self-reported physical health, in women with systemic lupus erythematosus. Future prospective research should assess the predictive role of fitness regarding disease activity and function.

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AB0556

THE DIAGNOSTIC AND PREDICTIVE SIGNIFICANCE OF NAILFOLD VIDEO CAPILLAROSCOPY IN CTD PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION

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Background: Pulmonary arterial hypertension (PAH) is a serious complication of connective tissue diseases (CTD), defined as an elevation in mean pulmonary artery pressure 25 mmHg at rest. The 1 year, 3 year survival rates of CTD-PAH are only 69% and 30% respectively. Therefore, to early prediction and diagnosis of PAH is very critical for prolonging survival of CTD patients. Nailfold video capillaroscopy (NVC), is an imaging technique for the study of microcirculation. Until now, capillary abnormalities in systemic sclerosis (SSc) are well documented, but rare study focus on the association between the abnormality of capillary with PAH in CTD patients.

Objectives: Through estimating the correlation of the abnormality of nailfold capillary with pulmonary arterial hypertension (PAH) and other organs injury to find out its importance on early diagnosis and prediction for PAH in the patients with connective tissue disease (CTD).

Methods: Nailfold video capillaroscopy (NVC) was performed using a videocapillaroscope to test the fingers capillaries of 123 hospitalised CTD patients with and without PAH. The parameters of NVC were estimated including: the inter, outer and top loop diameter, loop number, misshaped or giant capillaries, flowing speed, haemorrhage, erythrocyte aggregation, et al. The organ involvement like interstitial lung disease (ILD) and cardiovascular complications were also considered. Mann-Whitney test was used to estimate the difference.

Results: 1) The number of capillary loops in patients with SSc was much lower, but morphologic score, liquid score, and total score were all higher than other CTD patients (Tab). 2) The loop number was significantly decreased but abnormal scores of morphology, liquid, diameter, misshaped loop number, flowing speed, erythrocyte aggregation were increased in CTD-PAH patients especially in SLE-PAH compared with non-PAH patients (Fig). 3) ILD relates the abnormality of peripheral circulation such like capillary malformation, decreased loop number, diameter and blood flow, increased haemorrhage, but the influence of PAP may be larger than ILD. 4) Down-regulated loop number, increased morphology, liquid and total score, and abnormal diameter, malformation, erythrocyte aggregation were found in CTD patients with cardiovascular complications, especially in CTD-PAH patients and SLE patients. 5) Age doesn't directly influence the capillaries of CTD patients, but in young and middle age patients, the difference between PAH and non-PAH groups were more evident.

Abstract AB0556 – Table 1. Comparison of number of nail fold capillaries in patients with various CTD

disease	SSc	SLE	SS	PM/DM	RA
loop number	4.688 ± 1.301	5.915 $\pm 1.512^{***}$	5.875 $\pm 1.495^{**}$	5.717 $\pm 1.49^{**}$	6.417 $\pm 1.429^{**}$
morphologic score	4.117 ± 0.293	2.389 $\pm 0.342^{**}$	2.378 $\pm 0.376^{***}$	2.293 $\pm 0.346^{***}$	2.5 $\pm 1.253^{*}$
liquid score	1.942 ± 0.402	0.5277 $\pm 0.101^{***}$	0.6541 $\pm 0.111^{***}$	0.7367 $\pm 0.125^{**}$	0.5333 $\pm 0.217^{*}$
total score	8.321 ± 0.874	4.628 $\pm 0.612^{***}$	4.297 $\pm 0.569^{***}$	4.54 $\pm 0.572^{***}$	4.633 $\pm 1.972^{***}$

Abstract AB0556 – Figure 1. Loop number and other indexes of nail fold capillaries in patients with various CTD and CTD-PAH with non-PAH CTD