AB0468

QUALITY OF LIFE IN SYSTEMIC LUPUS WOMEN WITH CUTANEOUS DAMAGE ON THE FACE: COSMETIC CAMOUFLAGE IMPACT

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Background: Health-related quality of life (HRQoL) can be negatively impacted by visible skin lesions.¹

Objectives: To investigate the effect of cosmetic camouflage on health-related quality of life of systemic lupus erythematosus (SLE) women presenting sequelae of cutaneous manifestations on the face.

Methods: This is a randomized controlled clinical trial (Universal Trial Number: U1111-1210-2554e) with outpatients SLE women according to ACR/1997 and/or SLICC/2012 criteria, aged over 18 years old with sequelae of cutaneous lupus manifestations on the face, recruited in two tertiary centers. Exclusion criteria were: moderate to severe systemic lupus activity (SLEDAI 2k-modified >4), no understanding of the questionnaires or psychological and/or psychiatric treatment initiation or modification during the study. A final sample of 43 patients was divided into group I (cosmetic camouflage n=28) and group II (control n=15). Patients in group I were instructed to use cosmetic camouflage daily; Group II patients did not use any camouflage. SLE Quality of Life (SLEQoL) and Dermatology Quality of Life Index (DLQI) questionnaires were used to evaluate HRQoL, higher scores meaning worse HRQoL. All patients answered the questionnaires at baseline (T0) and after 12 (±2) weeks (T1). The primary end point was a change on HRQoL after camouflage cosmetic use. Continuous variables were described as median (interquartile range). The Wilcoxon signed rank test and the Mann-Whitney U test were used for the analysis as indicated. End points were investigated per-protocol analysis, and a 2-sided p value <0.05 was considered to be significant.

Results: Both groups were similar at baseline regarding age [group I: 45.0 (37.3-55.7) years old versus group II: 50.0 (43.0-55.0) years old, p=0.575], disease duration [group I: 17.5 (7.3-26.5) years versus group II: 15.0 (9.0-17.0) years, p=0.452] and modified SLEDAI-2k [group I: 0 (0-2) versus group II: 2 (0-2), p=0.301]. Also, they were similar considering the sociodemographic, clinical and treatment characteristics of the disease. The DLQI and SLEQoL scores decreased in the cosmetic camouflage group from baseline: DLQI [T0: 8.5 (4.0-16.0) versus T1: 3.0 (1.0-7.5), p=0.008]; SLEQoL [T0: 118.0 (91.0-154.3) versus T1: 95.5 (76.0-135.0), p=0.003]; while there was no variation in the control group: DLQI [T0: 8.0 (3.0-12.0) versus T1: 7.0 (4.0-12.0), p=0.196]; SLEQoL [T0: 89.0 (65.0-127.0) versus T1: 95.5 (65.0-164.0), p=0.532]. The difference on the variations of HRQoL scores between groups I and II was statistically significant: ΔDLQI [group I: -3.0 (-10.8-0.0) versus group II: 1.0 (-1.0-6.0), p=0.003] and ΔSLEQoL [group I: -14.5 (-33.0-0.0) versus group II: 3.0 (-8.0-10.0), p=0.009]. The SLEQoL score variations were on physical function (p=0.033), humor (p=0.033) and self-image (p=0.031) domains.

Conclusion: In this group of SLE women with low systemic disease activity and sequelae of cutaneous manifestations on the face, we observed an improvement of HRQoL after daily use of cosmetic camouflage. It is an effective intervention that should be recommended by the rheumatologists.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.4837

AB0469

THE EFFECTS OF ACUPUNCTURE ON XEROSTOMIA, XEROPHTHALMIA AND ANTIBODY MODIFICATION IN PATIENTS WITH SJÖGREN SYNDROME: A META-ANALYSIS

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Background: Xerostomia and xerophthalmia are common chief complaints among patients with Sjögren syndrome (SS) but there has been no satisfying pharmacy to relieve the associated symptoms; hence the effectiveness of other non-pharmacological interventions such as acupuncture should be accessed.

Objectives: To access the therapeutic effects of acupuncture on xerostomia and xerophthalmia in patient with SS.

Methods: We conducted a meta-analysis of randomized clinical trials (RCTs) which evaluated the effectiveness of xerostomia and xerophthalmia in SS. PubMed, Embase, Cochrane Central Register of Controlled Trials (CENTRAL), Chongqing Weipu Database (CQVIP), China Academic Journals Full-text Database, AirtelLibrary, Chinese Electronic Periodicals Service (CEPS), China National Knowledge Infrastructure (CNKI) Database were searches through Oct, 2018 to select studies. Data for evaluation of subjective and objective xerostomia was extracted and was assessed with random-effects meta-analysis.

Results: After searching, a total of 680 references were yielded and five RCTs were included, covering 460 patients dry mouth resulted from SS, among whom 229 patients received acupuncture and 231 patients were control group. Acupuncture group was associated with higher subjective response rate (odds ratio 3.036, 95% confidence interval [CI] 1.828 – 5.042, P < 0.001, Fig. 1) and increased salivary flow rate (weighted mean difference [WMD] 3.066, 95% CI 2.969 – 3.164, P < 0.001, Fig. 2), as an objective marker. Regarding xerophthalmia, acupuncture group revealed less dry eye visual analog scale (VAS, WMD -1.035, 95% CI -1.457 - -1.673, P < 0.001, Fig. 3), better Schirmer test (WMD 2.357, 95% CI 1.021 – 3.692, P = 0.001, Fig. 4) and trend of longer break-up time (WMD 4.927, 95% CI -0.055 – 9.908, P = 0.053, Fig. 5). In addition, two studies examined IgG levels, which were lower in the acupuncture group (WMD -166.857, 95% CI -233.138 - -100.576, P < 0.001, Fig. 6).

Conclusion: In the present meta-analysis, acupuncture improves both subjective and objective markers of xerostomia and xerophthalmia in patients with SS and is considered as an option of non-pharmacological treatment.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.1765

AB0470

IMMUNOREGULATORY THERAPY EFFECTIVELY PROMOTES THE BALANCE BETWEEN TREG CELLS AND PRO-INFLAMMATORY LYMPHOCYTES IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Recent studies have reported that some drugs such as low-dose interleukin-2, rapamycin, metformin, retinoic acid and coenzyme Q10 could promote the proliferation and functional recovery of regulatory T cells (Treg) in patients with autoimmune diseases. However, the effects on the balance of Treg cells and pro-inflammatory lymphocytes and long-term efficacy have rarely been reported.

Objectives: To evaluate the changes of peripheral lymphocyte subsets, conventional drugs and remission rate in patients with systemic lupus erythematosus (SLE) after immunomodulatory therapy.

Methods: A total of 89 patients with SLE from the Second Affiliated Hospital of Shanxi Medical University from January 2016 to April 2018 were enrolled, who were divided into well-controlled group and untargeted control group taking a full consideration of the patient's symptoms, signs and related laboratory findings. We measured the absolute counts of B, NK, CD8+T and helper T 1 (Th1), helper T 2 (Th2), helper T 17 (Th17) and Treg cells in peripheral blood of patients before immunomodulatory therapy and during the 3 months and 6 months of follow-up and 93 sex- and age- matched control individuals using flow cytometry. Moreover, the ratios of various cells to Treg cells were calculated.

Results: Compared with healthy controls, Treg cells in SLE patients were significantly lower before the treatment with immunomodulator, while the ratios of various pro-inflammatory lymphocytes to Treg cells (such as Th2/Treg, Th17/Treg, CD8+T/Treg, etc.) were higher. After 3 months and 6 months with immunomodulatory therapy, the absolute number of Treg cells in peripheral blood of SLE patients increased obviously reaching to normal level. Accordingly, the ratios of various pro-inflammatory lymphocytes to Treg cells recovered. At the same time, the dose of glucocorticoid and disease-modifying antirheumatic drugs (DMARDs) decreased distinctly. Additionally, the well-controlled group was able to maintain a high remission rate, and the untargeted control group could achieve a higher response rate after immunomodulatory treatment.

Conclusion: The imbalance between pro-inflammatory lymphocytes and Treg cells caused by the significant decrease of Treg cells may be the main cause of SLE. And immunomodulatory therapy we came up with may reverse the imbalance of proinflammatory lymphocytes and Treg cells, which is an potential and effective treatment for SLE.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.2151

AB0471

VITAMIN D SUPPLEMENTATION IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS WITH VITAMIN D DEFICIENCY AND INSUFFICIENCY: THE EFFECT ON DISEASE ACTIVITY, FATIGUE AND INTERFERON SIGNATURE GENE EXPRESSION

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Background: Vitamin D deficiency is highly prevalent among patients with systemic lupus erythematosus (SLE) [1]. Evidence from multiple studies has shown that vitamin D deficiency in SLE is associated with a higher disease activity [2]. There is conflicting evidence with regards to the relationship between fatigue and vitamin D level [3,4].

Objectives: The principal aim of this study was to establish any potential effect on the level of fatigue, disease activity (measured by SLE disease activity index-2K (SLEDAI-2K)) and interferon signature gene expression, from vitamin D supplementation to SLE patients with vitamin D deficiency or insufficiency.

Methods: 33 SLE patients, 13 with vitamin D deficiency and 20 with vitamin D insufficiency, gave informed consent to participate in this 12 month prospective study. Their participation consisted of an interview, filling of the Fatigue Severity Scale (FSS), and blood tests. The patients were advised to take vitamin D3 8000IU daily for 8 weeks if they were vitamin D deficient, or 8000IU daily for 4 weeks if they were insufficient. This was followed by 2000IU daily maintenance. The patients were re-assessed after 6 and 12 months of vitamin D supplementation. RNA was extracted from whole blood taken from the patients at baseline and after 6 months of vitamin D supplementation. The expression of 12 interferon signature genes was measured in the extracted RNA by using QuantiGene Plex technology. Approval to carry out this study was obtained from the University Research Ethics Committee.

Results: 87.9% of SLE patients studied were female. The mean age was 47.6 years and the mean duration of SLE was 13.8 years. Table 1 shows the results obtained for several variables at baseline, after 6 months and after 12 months. The expression of all 12 interferon signature genes measured, was noted to decrease following 6 months of vitamin D supplementation. This reached statistical significance for two of the genes measured (OAS1, p=0.014; SOCS1, p=0.003).

Variable	Time	Mean	Standard Deviation	p-value
SLEDAI-2K	Baseline	3.97	3.359	0.210
	6 months	3.36	2.924	0.009
	12 months	2.61	2.193	
	months			
Anti-dsDNA level (IU/mL)	Baseline	210.31	234.416	0.032
	6 months	194.08	214.129	0.030
	12 months	190.50	208.131	
	months			
Prednisolone daily dose (mg)	Baseline	1.93	3.458	0.043
	6 months	2.30	4.089	0.042
	12 months	1.33	2.931	
	months			
FSS	Baseline	4.21	1.536	0.206
	6 months	3.93	1.577	0.053
	12 months	3.81	1.859	
	months			
25-hydroxyvitamin D (ng/mL)	Baseline	21.91	6.336	<0.001
	6 months	32.88	6.594	0.001
	12 months	28.48	9.291	
	months			

Abstract AB0471 Table 1. Table showing results at baseline, after 6 months and after 12 months of vitamin D3 supplementation.

Conclusion: The results indicate that vitamin D supplementation in SLE patients who are deficient or insufficient, results in an improvement in disease activity, and possibly also in the level of fatigue. This could be explained by the decrease in the expression of interferon signature genes.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.1109