but non-significant trend of higher annual rates of mild/moderate and severe flares over time was also observed in patients with vitamin D deficiency. At the last visit, 27 (10%) patients had new damage scores; 5 patients had new vascular events; and 4 patients had new onset diabetes mellitus. There were no significant differences among the three groups of patients with regard to the incidence of new damage or vascular events over time.

Conclusions: Vitamin D insufficiency and deficiency was frequent in our cohort of SLE patients. Patients with vitamin D deficiency were associated with higher baseline and mean disease activity scores, as well as a tendency of more severe lupus flares over time.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3945

SAT0268 CLINICAL PRESENTATION OF NASAL INVOLVEMENT IN PRIMARY SJÖGREN'S SYNDROME: A MULTIDISCIPLINARY TEAM APPROACH TO A NEGLECTED AND DISABLING CONDITION

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Background: Dry nose is reported quite frequently by patients affected by primary Sjögren's syndrome (pSS) in daily practice. However, a clear definition of nasal involvement in pSS is not available.

Objectives: a) to explore clinical presentation of nasal involvement in pSS analyzing key symptoms, objective findings at the inspection of the external and inner nose and nasal cytology b) to investigate any associations/correlation between nasal involvement and other clinical-serological disease manifestations c) to assess the overall impact of nasal involvement on patients reported outcomes (PROs).

Methods: Consecutive pSS patients (AECG 2002) were seen by a team of rheumatologists and ENT specialists. In addition to a standard rheumatologic evaluation, all the patients underwent a complete ENT evaluation. Nasal symptoms (i.e dry nose, nasal stuffiness, crusting, hyposmia) were collected by an "ad hoc questionnaire" and scored by the patients on visual analogique scales. Inspection of the external and inner nose, endoscopy of the nasal cavity and nasal cytology were performed as well. Allergy testing were also carried out when indicated. The following tools were used to assess PROs: ESSPRI, SF-36 and SNOT-22.

Results: Forty-six pSS patients were included in the study [M:F =45:1; median age (IQR):64 (53–70); median disease duration (IQR): 66 months (24–120)]. Nasal symptoms ranged from: dryness in the nose (56.5%), crusting 10/46 (21.7%), nasal stuffiness 20/46 (45.5%) and hyposmia 7/46 (15.2%). Thirteen patients did not present signs of nasal involvement, whereas 21 patients (45.7%) presented rhinitis sicca (RS), 6 (13%) allergic rhinitis (AR), 4 (8.7%) chronic rhinosinusitis (CRS) and 2 (4.3%) non-allergic rhinitis (NAR). Patients with nasal involvement were more frequently seronegative (p=0.04) and presented significantly higher SNOT-22 scores (p=0.008) when compared to patients without nasal involvement; no additional demographic or clinical differences between the two groups. Allergy testing were more frequently positive in patients with RS and AR. Nasal cytology showed that the rates of the cells (eosinophils and neutrophils) in patients without nasal involvement were negligible whereas they were significantly increasead in pSS patients with RS and AR. The SNOT-22 (r=-.433, p=0.02) and the scores assigned to the VAS of nasal dryness (r=-.755, p=0.003) and crusting (r=-.794, p=0.001) strongly correlated with SF-36 questionnaire. SNOT-22 also correlated with the ESSPRI (r=.399, p=0.04), whereas we did not find a correlation between VAS scores assigned to nasal dryness and VAS scores of oral and ocular dryness. PROs related to nasal symptoms were significantly influenced by a concomitant diagnosis of fibromyalgia.

Conclusions: Rhinitis sicca was the most common clinical presentation of nasal involvement in pSS patients, especially in seronegative patients. Apparently, nasal symptoms correlated weakly with ocular and oral dryness. PROs exploring nasal symptoms revealed that nasal involvement impact significantly on patients quality of life.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4349

SAT0269 RDW LEVELS ARE ASSOCIATED WITH DAMAGE ACCRUAL IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Systemic Lupus Erythematosus (SLE) patients show higher Red blood cells Distribution Width (RDW) regardless of anaemia status[1]. RDW has been found to positively correlate with serum IgM, CRP, ESR, and SLE Disease Activity Index 2000 (SLEDAI-2K), and glucocorticoid treatment decreased both SLEDAI-2K and RDW[2].

Objectives: To determine whether RDW levels in SLE are associated with damage accrual.

Methods: This cross-sectional study was conducted in 276 SLE patients, 257 females and 19 males. Evaluations included interview, medical records review, physical examination and laboratory tests. Disease activity was measured with the SLEDAI. Damage accrual was ascertained with the SLICC/ACR damage index (SDI). Univariable and multivariable Poisson regression models were performed to determine if RDW levels were associated with damage accrual. These models were stratified by tertiles of RDW. The multivariable model was adjusted for variables known to be associated with this outcome [age at diagnosis, gender, socioeconomic status, ethnicity, tobacco use, disease duration, SLEDAI, anemia, antimalarials and immunosuppressive drugs use, average daily dose and time of exposure to prednisone (PDN)].

Results: The patients mean (SD) age at diagnosis was 34.38 (13.33) years; nearly all patients were mestizo. Disease duration was 7.04 (6.16) years. The SLEDAI was 5.24 (4.67) and the SDI 0.92 (1.28). The average daily dose of PDN was 6.90 (6.07) mg/d and the time of exposure to PDN was 6.58 (9.59) years. RDW levels were 14.57 (1.52)%. Hemoglobin levels were 12.4 (1.7) g/dl. We divided the RDW levels into tertiles with cut points in 13.8 and 14.0; the highest tertiles were associated with disease damage; with a Rate Ratio (RR) 1.57 (1.07–2.28; p: 0.020 for the highest tertile, and 1.67 (1.15–2.42; p: 0.007) for the medium tertile.

Conclusions: Higher RDW levels are associated with damage accrual in SLE patients independent of other well-known risk factors for such occurrence.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.6368

SAT0270 ULTRASONOGRAPHY OF MAJOR SALIVARY GLANDS IN JUVENILE SJÖGREN'S SYNDROME – PRELIMINARY FINDINGS IN A MULTI-CENTER STUDY

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Background: Juvenile Sjögren's syndrome (jSS) is a rare, poorly defined and possibly underdiagnosed condition. There is little information on the use of major salivary gland ultrasonography (SGUS) in this patient-group.

Objectives: To characterize symptoms and clinical findings of jSS and to investigate SGUS as a diagnostic tool.

Methods: Sixty-four patients were recruited from Brazil (n=40), Norway (n=11), the Netherlands (n=8) and Spain (n=5). All patients had disease onset at the age of 18 or younger. Clinical examination and sialometry was performed in 60/64 patients. Additional clinical information was obtained from the medical records and through patient interview. SGUS of the parotid and submandibular glands was performed in all patients using linear high-frequency transducers (6–15 MHz), by an expert in SGUS. Glandular homogeneity and presence of hypoechogenic areas were evaluated and glands characterized as normal or SS-like.

Results: The female:male ratio was 6:1. Mean age at diagnosis was 12.1 years (range 4–18), with first symptoms occurring at 10.3 years (range 1–17). Time from onset of symptoms until diagnosis was 1.6 years (range -2–8 years). Subjective oral and ocular symptoms were reported in 70% and 64% patients, respectively. Reduced secretion of tears was detected in 41% patients, and hyposalivation in 31% patients. Minor salivary gland lip biopsy had been performed and focus score determined in 34 patients; 28 biopsies (82%) had focus score $\geq$1. Serologically, 92% were positive for ANA, 73% were anti-Ro/SSA+, 38% were anti-La/SSB+, and 41% were RF+. Salivary gland enlargement had been experienced by 53% of the patients; one patient had also experienced lacrimal gland enlargement. Systemic manifestations at some time-point, was registered in 66% of the patients. Systemic treatment at inclusion was registered in 67% of the patients; previous systemic treatment was registered in 83%. Diagnostic criteria for primary Sjögren's syndrome (pSS) was fulfilled by 34/64 patients (53%) and 39/64 patients (61%),

AECG criteria and ACR/EULAR criteria, respectively. SGUS revealed SS-like changes in 37/64 patients (59%); interestingly, SS-like findings were observed in 22/23 patients in the European cohort, compared to 15/40 patients in the Brazilian cohort.

Conclusions: Common symptoms and findings in jSS include dry mouth, systemic manifestations and salivary gland enlargement, followed by reduced tear secretion and hyposalivation.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5804

SAT0271 IS THERE A NEED TO INCLUDE SEROLOGICAL PATTERN TO PREDICT DAMAGE IN PATIENTS WITH ANTIPHOSPHOLIPID SYNDROME: DIAPS APPLICATION

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Background: Antiphospholipid syndrome (APS) is an autoimmune disease defined as the presence of antiphospholipid antibodies (aPL), at least a clinical thrombotic event and is associated with an important risk of organ damage. The new index proposed, Damage Index in patients with Thrombotic Antiphospholipid Syndrome (DIAPS) may be an useful tool to estimate cumulative damage in patients with primary and secondary APS. It includes 38 clinical items expanded to show the complexity of clinical manifestations in APS patients.

Objectives: The aim of this study is to analyze the serological pattern as potential predictive factor for an increased DIAPS.

Methods: All consecutive patients known with APS according to the Sapporo and/or Sydney classification criteria were included in our monocentric cohort. Data on medical history, clinical manifestations, aPL profile and medication were collected. DIAPS score was used to measure damage in each patient. The relationship between aPL profile and DIAPS score was analysed.

Results: Seventy six patients with APS were included: 11 patients with primary APS, 65 patients with secondary APS. Their mean disease duration was 9.59±7.39years. The most frequent clinical manifestation from DIAPS was the peripheral vascular (deep vein thrombosis, intermittent claudication, tissue loss, vascular venous insufficiency) found in 61.8% of patients, followed by the neuropsychiatric manifestations (46.1%). The mean DIAPS score in our cohort was 4.25±3.51, not significantly different between patients with primary vs secondary APS (4.72 vs 4.16, p=0.629). Lupus anticoagulant (LA) was found in 25 patiens (32.9%), anti cardiolipin antibodies (aCL) in 49 patients (64.5%) and antibodies to β2-glycoprotein I (β2GPI) in 23 patients (30.3%). There were 36 patients known with a single positive aPL (47.4%), 27 patients (35.5%)with 2 positive aPL and only 2 patients with triple positivity. There were no significant differences regarding antibody profile between patients with primary and secondary APS. Higher values of DIAPS were seen in patients with β2GPI (p=0.042) and with positivity for 2 aPL (p=0.003). DIAPS value correlated to the presence of β 2GPI (p=0.042, R=0.233) and to positivity for two aPL (p=0.003, R=0.341).

Conclusions: Our study suggests that double positivity for aPL, especially the presence of β2GPI confers an increased value of DIAPS in patients with primary and secondary APS.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4105

SAT0272 LACK OF ASSOCIATION OF GLUCOCORTICOID EXPOSURE AND METABOLIC SYNDROME IN SLE

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Background: The Metabolic Syndrome (MetS) is a disorder of energy utilisation and storage, associated with an increased risk of cardiovascular (CV) disease. MetS may contribute to the increased CV disease in SLE, but the prevalence, cause, and impact of MetS in SLE is poorly understood, as are the effects of glucocorticoid (GC) exposure.

Objectives: To characterise the prevalence of the features of MetS in a well-characterised cohort of SLE patients, and determine the effect of GC use on these parameters.

Methods: SLE patients studied as part of a single centre prospective longitudinal cohort. Disease activity (SLEDAI-2K), treatment and laboratory details were recorded at each visit. Other investigation results were collected from institution databases. MetS defined as ≥3 criteria[1]: BMI >30kg/m^2; triglycerides>1.7mmol/L; HDL-cholesterol <1.3mmol/L; blood pressure >130/85mmHg or treatment for hypertension; fasting glucose >5.6mmol/L or treatment for hyperglycaemia. Continuous variables were described as median (IQR), and compared using Kruskal-Wallis tests. Categorical variables were described as frequency and compared using Chi-squared tests.

Results:

	Total (289)	GC exposed (211)	GC not –exposed (78)	p-value
BMI >30kg/m^2	50 (17%)	33 (24%)	17 (22%)	0.22
éTriglycerides	80 (28%)	69 (33%)	11 (14%)	0.002
êHDL-cholesterol	95 (33%)	73 (35%)	22 (28%)	0.33
é Fasting glucose	32 (11%)	24 (11%)	8 (10%)	1.00
Hypertension	137 (47%)	110 (52%)	27 (35%)	0.01
Metabolic Syndrome	*49 (17%)*	*36 (17%)*	*13 (17%)*	*1.00*

289 patients were included (87% female; 51% Caucasian, 29% Asian), and median age at enrolment of 37.7y. Median follow-up was 3.43y (med 15 visits). Time adjusted-mean SLEDAI (AMS) over the study period was 3.67. 81% (211) patients received GC (time-adjusted mean 4.25mg prednisolone/d) and AMS was significantly higher in GC-exposed patients (4.19 vs 1.97 [EM1], p<0.01). MetS criteria were met by 49 (17%) of patients (Table 1). Hypertriglyceridaemia and hypertension were significantly more frequent in GC-treated patients, but the prevalence of obesity and other MetS domains, or MetS overall, were not. There were significantly more patients with MetS score =0 in the GC-exposed subset (43/78 vs 76/211 p<0.01).

The prevalence of obesity of 17% is lower than in the general population. There was no significant change in BMI across the period of observation and surprisingly, no association between GC exposure and change in BMI.

Conclusions: The prevalence of MetS in SLE was lower than previously reported in other, smaller, lupus cohorts [2,3]. This study suggests GC exposure was associated with hypertriglyceridaemia and hypertension in SLE. Potential negative effects of active disease on MetS domains require further investigation.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.6764

SAT0273 FACTORS RELATED TO ALEXITHYMIA IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Several evidences described a considerable prevalence of alexithymia among patients with chronic diseases, such as systemic autoimmune diseases. In patients affected by Systemic Lupus Erythematosus (SLE), alexithymia seems to be related to mood disorders and personality.

Objectives: In this study we evaluated alexithymia in relation to HR-QoL (Health related Quality of Life) and to factor associated to HR-QoL, such as mood disorders, fatigue, work ability, sleep quality and physical activity.

Methods: We consecutively enrolled SLE patients and healthy controls in a cross sectional study with a retrospective design. We wvaluated alexithymia by the Toronto Alexithymia Scale 20 (TAS-20). AHR-QoL was expressed by MOS-SF-36. Mood disorders was assessed by BDI and HAM-H. Fatigue was evaluated by Facit-Fatigue. Physical activity was quantified using International Physical Activity Questionnaire (IPAQ) and the sleep quality using the Pittsburgh Sleep Quality Index (PSQI). Work ability was assessed by Work Productivity and Activity Impairment (WPAI). Cognitive impairment was defined according to MOCA screening test.

Results: Fifty-two SLE patients and 50 age-matched healthy subjects were enrolled in the study. Mean TAS-20 score was significantly higher in SLE compared to controls (p<0.01). Alexithymic patients presented increased values of BDI score and HAM-H score (p<0.01 and p<0.05) and reduced Facit-Fatigue score (p<0.05). We found increased values of Work missed due to health problems and Activity impairment in alexithymic SLE subjects (p<0.05). SF-36 summary components PCS and MCS and SF-36 individual components did not significantly differ between alexithymic and non-alexithymic SLE. A greater proportion of alexithymic SLE patients presented fibromyalgia (p<0.05), low scholastic education (p<0.01), cognitive impairment according to MOCA test (p<0.01) and mild-to-severe depression according to BDI (p<0.01). We did not find differences among alexithymic and non alexithymic in MeS, obesity and physical inactivity prevalence. TAS-20 values positively correlated with BDI score (p<0.001), HAM-H score (p<0.01) and activity impairment score (p<0.01) and negatively with Facit-Fatigue score (p<0.01). In multiple linear regression,