≥ MCID at week 12 compared with PBO. Similarly, more pts receiving TCZ-SC reported scores ≥ normative values at week 12 compared with PBO, despite few pts with such scores at baseline. Responses were similar between pts treated with TCZ-SC and TCZ-IV + csDMARDs in SUMMACTA at week 24. These data show TCZ treatment resulted in clinically meaningful improvements in PROs and indicate that attainment of normative scores is a realistic goal in treatment of pts with active RA.

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FRI0254 EFFICACY OF TOCILIZUMAB FOR SUPPRESSING RADIOGRAPHIC PROGRESSION OF CERVICAL LESIONS IN PATIENTS WITH RHEUMATOID ARTHRITIS COMPARISON WITH METHOTREXATE TREATMENT; TWO YEARS OF FOLLOW-UP ~A MULTICENTER REGISTRY STUDY ~

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Background: Cervical lesions are known to occur at high frequency as a complication of rheumatoid arthritis (RA). Treatment with biological agents are more clinically effective than the DMARDs that were in use previously, in particular, with their efficacy in suppressing joint destruction having been emphasized. We reported the efficacy of infliximab, anti-tumor necrosis factor antibodies for suppressing the radiographic progression of RA cervical lesions at ACR2009, EULAR2010, 11, 12, 13, 14 and 16. However there is still few studies of efficacy of against RA cervical lesions of Tocilizumab (TCZ), anti-interleukin 6 receptor antibody.

Objectives: To evaluate the efficacy of TCZ for suppressing the radiographic progression of RA cervical lesions comparison with MTX for 2 years.

Methods: We used TCZ or MTX for treating Japanese patients with active RA who fulfilled the ACR criteria in 1987. The final study cohort of each 38 and 71 patients received continuous TCZ and MTX treatment for at least 2 years. For evaluation of cervical lesions, the atlanto-dental interval (ADI), the space available for the spinal cord (SAC), and the Ranawat value were measured by plain lateral radiographs in the flexion position, at initiation and Year 1,2.

Results: In the patients receiving TCZ (n=38) and MTX (n=71), the number of female were each 28 (72%) and 51 (72%) cases (p=0.999). The mean age was 57.3±12.4 and 63.3±10.9 years old (p=0.011); disease duration was 7.0±7.3 and 8.8±9.7 years (p=0.929) and the mean dose of MTX was 9.0±3.4 and 8.3±2.9 mg/w (p=0.335). Clinical findings related to RA were as follows: CRP 3.8±3.1 and 1.5±2.1 mg/dl (p<0.001); ESR 52.7±25.3 and 30.0±20.8mm/h (p<0.001); MMP3 400±300 and 213±356ng/ml (p<0.001); the number of RF-positive 30 (79%) and 58 (82%) cases (p=0.801); DAS28-ESR 5.46±0.92 and 4.24±1.34 (p<0.001); ADI 2.7±1.7 and 2.6±1.6mm (p=0.917); SAC 19.3±2.8 and 20.7±2.5mm (p=0.008) and Ranawat value 15.4±1.6 and 15.9±1.5mm (p=0.073). The respective changes in cervical lesion parameters after 1 year were as follows: ADI: 0.21±0.53 and 0.25±0.44 mm (p=0.327); SAC: -0.16±0.44 and -0.17±0.38 mm (p=0.653); and Ranawat value: -0.13±0.34 and -0.11±0.32 mm (p=0.773). The respective changes in cervical lesion parameters after 2 years were as follows: ADI: 0.32±0.70 and 0.52±0.67 mm (p=0.045); SAC: -0.24±0.49 and -0.45±0.63 mm (p=0.067); and Ranawat value: -0.24±0.49 and -0.35±0.56 mm (p=0.270). The respective changes in cervical lesion parameters after 2 years were as follows: ADI: 0.32±0.70 and 0.52±0.67 mm (p=0.045); SAC: -0.24±0.49 and -0.45±0.63 mm (p=0.067); and Ranawat value: -0.24±0.49 and -0.35±0.56 mm (p=0.270) in the patients receiving TCZ and MTX (Fig.1). The numbers of patients who did not

Figure 1: Respective changes in ADI, SAC and Ranawat value from Year 0 to Year 2 in the TCZ and MTX patients

showed progression in ADI, SAC and Ranawat value were each 30 (79%) and 41 (58%) cases (p=0.035); 30 (79%) and 44 (62%) cases (p=0.087) and 30 (79%) and 49 (69%) cases (p=0.367) after 2 years. Also the number who was able to suppress progression in all three parameters were each 29 cases (76%) receiving TCZ and 41 cases (58%) receiving MTX (p=0.062) after 2 years (Fig.2).

Conclusions: This study suggested that TCZ treatment can be used to suppress the progression of RA cervical lesions more than MTX treatment.

Disclosure of Interest: None declared

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SLE, Sjögren's and APS - clinical aspects (other than treatment)

FRI0255 PATTERNS OF DISEASE ACTIVITY IMPACT ON ORGAN DAMAGE IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease characterized by fluctuating disease activity in which adverse long-term outcomes remain a major challenge. In the face of extreme individual unpredictability of the disease course over time, four different patterns can be defined, as elsewhere described [1], using SLEDAI-2K (Systemic Lupus Erythematosus Disease Activity Index-2K) excluding serology in order to focus on clinical activity. The patterns are clinical quiescent disease (CQD), chronic active disease (CAD), relapsing-remitting disease (RRD) and minimal disease activity (MDA).

Objectives: The aim of our study was to assess the association between different disease activity patterns and damage accrual in SLE patients.

Methods: Patients with SLE registered at our Lupus Clinic at the Rheumatology Unit, between 1 January 2013 and 1 October 2016, were included. Demographic and clinical variables included age, gender, age at SLE onset, major organ involvement. SDI (Systemic Lupus International Collaborating Clinics/American College of Rheumatology (SLICC/ACR) Damage Index) was categorized as absent (SDI=0) or present (SDI ≥1). Disease activity patterns (CQD, MDA, RRD, CAD) were retrospectively assessed. Drugs used in the treatment of SLE, including hydroxychloroquine, cumulative dose of glucocorticoid (prednisone equivalent >10 g) and other immunosuppressive drugs, were also collected. Multivariate logistic regression analyses were performed to identify disease patterns associated with damage accrual. Results are presented as odds ratio (OR) and 95% confidence intervals (CI).

Results: A total of 473 Caucasian patients were observed, mainly female (89.4% F, 10.6% M), mean age 52.6 years (± 14.9 SD). In our cohort, the disease activity pattern distribution was as follows: 65.4% CQD (290 pts), 21.5% RRD (91 pts), 6.1% MDA (28 pts) and CAD in 19.1% of the cases (64 pts). Damage was significantly more frequent in CAD subset (81.2%, 52/64 pts) versus 54.5% in CQD (158/290 pts), 50% in MDA (14/28 pts) and 58.2% in RRD (53/91 pts). Compared to a CQD course, CAD pattern was independently associated with overall damage after controlling for factors including gender, disease duration, cumulative glucocorticoid dosage, major individual organ involvement (neuropsychiatric and renal), positive antiphospholipid antibody profile, exposures to cyclophosphamide and hydroxychloroquine (Table 1).

Table1. Logistic regression analysis of independent factors associated with damage in SLE patients

Factors	Crude odds ratio (95% CI)	P value	Adjusted* Odds ratio (95% CI)	P value
Disease Activity Pattern				
Clinical quiescent disease	Reference category		Reference category	
Minimal disease activity	0.84 (0.39 - 1.81)	0.650	0.77 (0.33 - 1.80)	0.541
Relapsing-remitting disease	1.16 (0.73 - 1.87)	0.529	1.03 (0.62 - 1.72)	0.900
Chronic active disease	3.62 (1.86 - 7.07)	<0.0001	3.07 (1.49 - 6.34)	0.002
Gender (M)	1.23 (0.68 - 2.22)	0.489	1.29 (0.68 - 2.43)	0.434
Disease duration (yr)	1.05 (1.03 - 1.07)	<0.0001	1.03 (1.01 - 1.06)	0.033
NP involvement	2.86 (1.65 - 4.94)	<0.0001	2.11 (1.17 - 3.80)	0.013
Renal involvement	1.35 (0.76 - 2.41)	0.301	0.95 (0.49 - 1.84)	0.877
aPL positivity	1.68 (1.16 - 2.44)	0.006	1.64 (1.09 - 2.47)	0.017
Cumulative dosage of CS (>10g PDN)	2.50 (1.69 - 3.71)	<0.0001	1.64 (1.03 - 2.61)	0.038
HCQ	0.37 (0.24 - 0.57)	<0.0001	0.41 (0.26 - 0.66)	<0.0001
CYC	2.46 (0.97 - 6.25)	0.058	1.89 (0.66 - 5.46)	0.236

* adjusted for: age, gender, disease duration, NP and renal involvement, cumulative dosage of CS; aPL positivity, HCQ, CYC (NP, neuropsychiatric; aPL, antiphospholipid; CYC, cyclophosphamide; HCQ, hydroxychloroquine; M, male; CS, corticosteroid; PDN, prednisone)

Conclusions: Our results demonstrated that a clinically and persistent CAD triples the risk of damage compared to milder or relapsing courses, while hydroxychloroquine appeared to have a "protective" effect. Identifying the prevailing pattern of disease activity in every patient can be translated into a more effective personalized preventing strategy to reduce damage accrual and improve outcomes.

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FRI0256 ULTRASOUND CONSENSUS DEFINITIONS ON NORMAL AND ABNORMAL FINDINGS IN SALIVARY GLANDS IN SJÖGREN'S SYNDROME: RESULTS OF AN OMERACT DELPHI PROCESS

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Background: Ultrasonography (US) of salivary glands (USSG) may support diagnosis and evaluation of disease activity in primary Sjögren's syndrome pSS. In order to extent the use of USSG in daily practice, consensus definitions of normal and abnormal USSG findings are needed.

Objectives: To obtain consensual definitions of normal and abnormal USSG findings using a Delphi process.

Methods: Twenty-seven experts participated in the Delphi process. A Likert scale from 1–5 was used in which 1 indicated complete disagreement and 5 complete agreement. Three core items were proposed: 1. Consensus of assessment of SG (parotid gland (PG), submandibular glands (SMG), sublingual glands (SLG)). 2. Consensus for elementary lesions of PG, SMG, and SLG changes in PSS patients. 3. Consensus on grading of PG, SM, and SLG in pSS.

Results: The consensus of definitions between experts was reached after three rounds. The results (table 1) showed agreement with more than 75% of agreement in normal and abnormal definitions in SG and concluded to not evaluate SLG in pSS patients as well as to score pSS SG patients with at least two abnormal glands out of 4 (2 PG and 2 SMG) with a scoring system >2 for each abnormal gland.

Conclusions: We developed a consensual US definition of normal and abnormal USGS findings through a Delphi exercise process. This finding will be used as a basis to further proceed with the validation of USGS for clinical application.

Disclosure of Interest: None declared

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FRI0257 URINARY ANGIOSTATIN, CXCL4 AND VCAM-1 AS BIOMARKERS FOR LUPUS NEPHRITIS

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Abstract FRI0256 – Table 1

(% of agreement)	Definition of normal US findings	Procedure of scanning	Definition of abnormal US findings	SG to evaluate in pSS	Definition of scoring
Parotid glands	Uniformly echoic texture with a clear delineation from the superficial tissue. Tissue comparable to thyroid parenchyma (81%)	Longitudinal and transverse plane (90%)	Focal or diffuse an/hypoechoic areas (95%)	yes	4-grade semiquantitative scoring system (i.e. grade 0, normal parenchyma; grade 1, minimal change; grade 2, moderate; grade 3, severe; diffuse inhomogeneity occupying all the surface of the gland) (79%)
Submandibular glands	SMG are usually of finer granular echo texture compared to PG or to the normal thyroid parenchyma (89.1%)	Longitudinal and transverse plane (90%)	Idem PG (95%)	yes	Idem PG (79%)
Sublingual glands	SLG has no clear delineation from the superficial tissue because of no true fascial capsule (77%)	longitudinal and transverse plane (77%)	Idem PG (95%)	no	Not useful

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Background: Our preliminary proteomic analysis revealed elevated levels of urinary angiotensin, CXCL4 and VCAM-1 in patients with active lupus nephritis

Objectives: To study the performance of urinary angiotensin, CXCL4 and VCAM-1 in differentiating between active renal and non-renal SLE.

Methods: Patients who fulfilled the ACR classification for SLE with active renal disease, active non-renal disease and inactive disease were randomly recruited, together with a group of healthy controls. Stored urine samples of the participants were assayed for angiotensin, CXCL4 and VCAM-1 and compared among the different groups. ROC analysis was performed to obtain the best cut-off values to calculate the performance of these markers in differentiating among the different groups of patients. SLE disease activity was assessed by the SELENA-SLEDAI and physician's global assessment (PGA). Specificity and sensitivity of these markers in differentiating between active renal and non-renal SLE was determined by 2x2 contingency tables. In patients with active renal disease, correlation between these urinary biomarkers with clinical renal parameters was also performed.

Results: 227 SLE patients (80 inactive SLE; 67 active non-renal disease; 80 active renal disease; 94% women, age 39.2±13.8 years) and 53 controls were studied. Urinary angiotensin, CXCL4 and VCAM-1 levels normalized for creatinine were significantly higher in patients with active renal than non-renal disease (angiotensin 18.4±27.1 vs 1.6±2.91 pg/ng; p<0.0001; CXCL 9.11±15.7 vs 5.12±10.4 pg/ng; p=0.003; VCAM-1.41±1.31x10³ vs 0.72±1.10x10³ pg/ng; p<0.0001). The levels of these urinary protein markers were also significantly higher in active SLE patients than inactive SLE patients or healthy controls. Urinary angiotensin, CXCL4 and VCAM-1 correlated significantly with the renal SLEDAI (Rho 0.66, 0.45 and 0.51, respectively; p<0.001 in all), total SLEDAI score (Rho 0.60, 0.46 and 0.53, respectively; p<0.001 in all) and urine protein-to-creatinine (uPCR) ratio (Rho 0.73, 0.51, 0.59, respectively; p<0.001) in all the SLE patients studied. Urinary angiotensin was more specific (specificity 0.82) than elevated anti-dsDNA and low C3 (specificity 0.64 and 0.66) in differentiating active renal SLE from non-renal SLE. In a subset of patients with biopsy proven active lupus nephritis (N=68), these urinary protein markers could not differentiate between proliferative (III/IV) from non-proliferative (I/II/V) types of lupus nephritis. However, urinary CXCL4 (Rho 0.25; p=0.049) and VCAM-1 (Rho -0.28; p=0.02), but not angiotensin (Rho 0.11; p=0.39), correlated significantly with the histologic activity index. There was no significant association between these protein markers and the histologic chronicity index or renal SLEDAI score. On the other hand, urine angiotensin levels (Rho 0.36; p=0.003), but not CXCL4 (Rho 0.07; p=0.59) or VCAM-1 (Rho -0.11; p=0.36), correlated significantly with the uPCR ratio in this subgroup of patients.

Conclusions: Urinary angiotensin, CXCL4 and VCAM-1 are potentially useful biomarkers for SLE, in particular lupus nephritis. Further longitudinal studies are necessary to delineate the sensitivity and specificity of these two urinary protein markers in predicting renal flares and prognosis in SLE patients.

Disclosure of Interest: None declared

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FRI0258 LONG-TERM PROGNOSIS OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS-ASSOCIATED PULMONARY ARTERIAL HYPERTENSION: CSTAR-PAH COHORT STUDY

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Background: SLE-associated pulmonary arterial hypertension (PAH) is common in Asian countries, and the clinical outcome of patients with SLE-associated PAH is dramatically impaired.

Objectives: This study aimed to identify the long-term clinical outcomes and prognostic factors of patients with SLE-associated PAH confirmed by right heart catheterization (RHC).

Methods: A multicenter cohort of SLE-associated PAH was established. Baseline and follow-up records were collected. The primary endpoint was death from any