vasculitis) were included into the study. Hundred and fourteen patients (16.6%) were ANA negative.

Sensitivity was more than 90% for 2012 SLICC criteria and 2019 EULAR/ACR criteria and positive predictive value was more than 90% for all three criteria (Table 1). Specificity was the highest for 1997 ACR criteria. Negative predictive value was 76.9% for ACR criteria, 88.4% for SLICC criteria and 91.7% for EULAR/ACR criteria.

In only ANA positive patients, sensitivity was 79.6% for 1997 ACR criteria, 92.2% for 2012 SLICC criteria and 96.1% for 2019 EULAR/ACR criteria. Specificity was 92.6% for ACR criteria, 87.8% for SLICC criteria 85.2% for EULAR/ACR criteria.

Eleven clinically diagnosed SLE patients had insufficient number of items for both 2012 SLICC and 2019 EULAR/ACR criteria. Both criteria were fulfilled by 16 diseased controls: 9 with Sjögren's syndrome, 5 with antiphospholipid syndrome, one with dermatomyositis and one with systemic sclerosis.

Table 1. Sensitivity, positive predictive value, specificity and negative predictive value of 1997 ACR, 2012 SLICC and 2019 EULAR/ACR classification criteria

	SLE (+)	SLE (-)	Sensitivity (%)	Positive Predictive Value (%)	Specificity (%)	Negative Predictive Value (%)
1997 ACR	(+) 308 (-) 84	15 279	78.6	95.4	94.9	76.9
2012 SLICC	(+) 357 (-) 35	26 268	91.1	93.2	91.2	88.4
2019 EULAR/ACR	(+) 368 (-) 24	28 266	93.8	92.9	90.5	91.7

Conclusion: In this cohort, although all three criteria have sufficient specificity, sensitivity and negative predictive value of 1997 ACR criteria are the lowest. Overall, 2019 EULAR/ACR and 2012 SLICC criteria have a comparable performance, but if only ANA positive cases and controls are analysed, the specificity of both criteria decrease to less than 90%. Some SLE patients with a clinical diagnosis lacked sufficient number of criteria. Mostly, patients with Sjögren's syndrome or antiphospholipid syndrome are prone to misclassification by both recent criteria.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.366

POS0707

SALIVARY GLAND ULTRASONOGRAPHY AND THE CLINICAL FEATURES USING ESSDAI IN PATIENTS OF EARLY-ONSET VERSUS LATE-ONSET WITH PRIMARY SJÖGREN'S SYNDROME

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Background: Primary Sjögren's syndrome (pSS) is a chronic inflammatory autoimmune disease characterized by lymphocyte infiltration in salivary and lacrimal glands. pSS affects primarily middle-aged and elderly patients, although younger age groups may also be involved. However, differences of etiology and pathogenesis between early-onset pSS (EOpSS) and late-onset pSS (LOpSS) are unknown. Recently, standardized outcome tools for measuring disease-specific activity and patients' reported symptoms have been formulated by the European League Against Rheumatism (EULAR) SS study group: the EULAR SS Disease Activity Index (ESSDAI) for systemic features of pSS [1]. Also, as the new imaging techniques, salivary gland ultrasonography (SGUS) proved valuable for assessing salivary gland involvement in SS and seemed to exhibit good diagnostic properties. In addition, previous studies have demonstrated usefulness of SGUS for the prognostic stratification of patients with pSS [2], [3], [4].

Objectives: The aim of this study was to examine the differences of etiology and pathogenesis between EOpSS and LOpSS using ESSDAI and SGUS.

Methods: Fifty-six pSS patients who fulfilled the American College of Rheumatology (ACR) / European League Against Rheumatism (EULAR) classification criteria for SS were studied. Based on the disease onset age, all pSS patients were divided into two groups as those with the onset age of 40 years old or younger (EOpSS: n=26) and those with the onset age of older than 65 years old (LOpSS: n=30). The clinical findings were evaluated ESSDAI and OMERACT SGUS score at the first visit to our hospital. The ESSDAI (0–123) proposes the evaluation of 12 domains or organ systems (constitutional, lymphadenopathy,

glandular, articular, cutaneous, pulmonary, renal, peripheral nervous system, central nervous system, muscular, hematological and biology). All patients were examined SGUS by a single investigator who was blinded to device (TUS-A300; Canon Medical Systems, Tokyo, Japan) with a linear transducer (7.5–10MHz). The OMERACT SGUS score was used for graded changes in the parenchymal homogeneity of salivary glands: grade 0, normal-appearing salivary gland parenchyma; grade 1, minimal change: mild inhomogeneity without hypo/anechoic areas; grade 2, moderate change: moderate inhomogeneity with focal hypo/anechoic areas; grade 3, severe change: diffuse inhomogeneity with hypo/anechoic areas occupying the entire gland surface [5].

Results: The proportions of positive sera of RF, anti-SS-A and anti-SS-B antibodies were not different in the two groups, but the disease activities were higher in the EOpSS than in the LOpSS patients by measuring ESSDAI (7.30 vs 4.23, p=0.008), especially in constitutional domain (1.50 vs 0.60, p=0.03), articular domain (1.54 vs 0.40, p=0.0002) and biological domain (1.35 vs 0.90, p=0.04). No difference in salivary secretion was found between two groups (EOpSS: 8.02 vs LOpSS: 6.31 mL/10min.), but the OMERACT SGUS score was higher in LOpSS than in EOpSS patients (2.00 vs 2.70, p=0.0002).

Conclusion: Although serological findings were not different, EOpSS patients had higher disease activity but less severe salivary gland degeneration than that in LOpSS patients, suggesting the pathogenesis of these two groups was different.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.419

POS0708

PSYCHIATRIC DISORDERS IN PATIENTS WITH DIFFERENT PHENOTYPES OF NEUROPSYCHIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS (NPSLE)

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Background: Patients with systemic lupus erythematosus (SLE) may present with psychiatric disorders. These are important to recognize, as they influence quality of life and treatment outcomes and strategies.

Objectives: We aimed to study the frequency of psychiatric morbidity as classified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) in patients with SLE and neuropsychiatric symptoms of different origins.

Methods: In the neuropsychiatric SLE (NPSLE) clinic of the Leiden University Medical Center, patients undergo a standardized multidisciplinary assessment by a neurologist, neuropsychologist, vascular internal medicine, rheumatologist, physician assistant and psychiatrist. After two weeks, a multidisciplinary consensus meeting takes place, in which the symptoms are attributed to SLE requiring treatment (major NPSLE) or to minor involvement of SLE or other causes (minor/non-NPSLE). Consecutive patients visiting the NPSLE clinic between 2007-2019 were included. Data of psychiatric evaluation and current medication use were extracted from medical records. The presence of cognitive dysfunction was established during formal neuropsychological assessment.

Results: 371 consecutive SLE patients were included, of which 110 patients had major NPSLE (30%). Mean age was 44 ± 14 years and 87% was female.

The most frequently diagnosed psychiatric disorders in the total group were cognitive dysfunction (42%) and depression (23%), as shown in Table 1. Furthermore, anxiety was present in 5% and psychotic disorders in 4% of patients. In patients with minor/non-NPSLE, especially depression (26% vs 15%) and anxiety (6% vs 2%) were more common than in major NPSLE. Cognitive dysfunction (54% vs 36%) and psychotic disorders (6% vs 4%) were more common in patients with major NPSLE than minor/non-NPSLE.

Psychiatric medication was used in 33% of patients, of which antidepressants and benzodiazepines the most frequently (both: 18% in both subgroups). Antipsychotics were more often used in patients with NPSLE (10% vs 7%) and benzodiazepines more often in minor/non-NPSLE (20% vs 14%).

In addition, 17 patients (5%) had a history of suicide attempt, which was more common in patients with minor/non-NPSLE than major NPSLE (6% vs 2%).

Conclusion: Psychiatric morbidity, especially cognitive dysfunction and depression, are common in patients with lupus and differ between underlying cause of the neuropsychiatric symptoms (minor/non-NPSLE vs major NPSLE).

Table 1. Presence of psychiatric diagnoses in patients with SLE and neuropsychiatric symptoms

	All patients (n = 371)	Minor/ non-NPSLE (n = 261)	Major NPSLE (n = 110)
DSM V diagnosis, n (%)			
Neurodevelopmental disorder	5 (1)	2 (1)	3 (2)
Schizophrenia Spectrum and Other Psychotic Disorders	16 (4)	10 (4)	6 (6)
Bipolar and related disorders	7 (2)	5 (2)	2 (2)
Depressive disorders	84 (23)	68 (26)	16 (15)
Anxiety disorders	17 (5)	15 (6)	2 (2)
Obsessive-Compulsive and Related Disorders	1 (0)	1 (0)	0 (0)
Trauma- and Stressor-Related Disorders	16 (4)	12 (5)	4 (3)
Dissociative Disorders	2 (1)	2 (1)	0 (0)
Somatic Symptom and Related Disorders	1 (0)	1 (0)	0 (0)
Feeding and Eating Disorders	0 (0)	1 (0)	0 (0)
Elimination Disorders	0 (0)	0 (0)	0 (0)
Sleep-wake disorders	2 (1)	2 (1)	0 (0)
Sexual dysfunctions	0 (0)	0 (0)	0 (0)
Gender dysphoria	0 (0)	0 (0)	0 (0)
Disruptive, Impulse-Control, and Conduct Disorder	0 (0)	0 (0)	0 (0)
Substance-related and addictive disorders	9 (2)	8 (3)	1 (1)
Cognitive dysfunction	154 (42)	95 (36)	59 (54)
Personality disorders	10 (3)	9 (3)	1 (1)
Paraphilic disorders	0 (0)	0 (0)	0 (0)
Other mental disorders	12 (3)	7 (3)	5 (5)
Medication-Induced Movement Disorders and Other Adverse Effects of Medication	0 (0)	0 (0)	0 (0)
Unknown	3 (1)	3 (1)	0 (0)

NPSLE = neuropsychiatric systemic lupus erythematosus.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.423

POS0709 LUPUS FOG IS NOT DISSOCIATIVE FOG

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Background: The presence of a 'fog' is frequently reported by patients with systemic lupus erythematosus (SLE). However, little is known about this lupus fog: it is thought to be a result of cognitive dysfunction, but fogs can also be the result of dissociation. The Dissociative Experience Scale-II (DES) is a standardized tool to study dissociation. In the general adult population, scores range from 4.4-14.¹⁻³

Objectives: We aimed to study the prevalence of dissociative symptoms including dissociative fog in patients with SLE and neuropsychiatric symptoms.

Methods: Patients visiting the tertiary referral center for neuropsychiatric systemic lupus erythematosus (NPSLE) of the LUMC between 2007-2019 were included. All patients underwent a standardized multidisciplinary assessment. Patients were classified as NPSLE if neuropsychiatric symptoms were attributed to SLE and immunosuppressive or anticoagulant therapy was initiated, otherwise patients were classified as minor/non-NPSLE. Dissociation was studied using the DES. The DES separates different types of dissociative symptoms: amnesia, absorption/imagination and derealization/depersonalization. It also contains one question regarding evaluating the presence of a dissociative fog: "Some people sometimes feel as if they are looking at the world through a fog, so that people and objects appear far away or unclear". All statements (n = 28) regarding dissociative symptoms are rated from 'none of the time' to 'all of the time' (0-100%); scores >25 are considered abnormal. A multiple regression analysis (MRA) were performed to compare dissociation in patients with and without NPSLE. DES results are presented as median (range) and MRA as odds ratio (OR) and 95% confidence interval (CI).

Results: DES questionnaires were available for 337 patients, of which 97 had the diagnosis NPSLE (29%). Mean age in patients with NPSLE was 41 ± 13 years and 84% was female. In minor/non-NPSLE, median age was 44 ± 14 years and 87% was female.

Median dissociation was 7 (0-75) and did not differ between patients with minor/non-NPSLE and NPSLE (OR: 1.0 (95% CI: -0.9; 1.1)). The most common type of dissociation was absorption/imagination (median: 12, range 0-75) and depersonalization/derealization was infrequent (median: 1, range 0-84). 43 patients (13%) had an abnormal score (>25) on the dissociative fog question.

Conclusion: Dissociative symptoms are within normal range in patients with SLE and neuropsychiatric symptoms, regardless of underlying etiology. Dissociative fog seems uncommon and therefore lupus fog is most likely not the result of dissociation.

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Table 1. Presence of dissociation in patients with SLE and neuropsychiatric symptoms

	Total cohort (n = 337)	Minor/non-NPSLE (n = 240)	NPSLE (n = 97)
DES (median, range)			
Total questionnaire	7 (0 - 75)	8 (0 - 66)	6 (0 - 75)
Amnesia	5 (0 - 76)	5 (0 - 68)	4 (0 - 76)
Absorption/imagination	12 (0 - 75)	13 (0 - 75)	10 (0 - 73)
Depersonalization/derealization	1 (0 - 84)	1 (0 - 73)	1 (0 - 84)
Dissociative fog*	0 (0-100)	0 (0-100)	0 (0-100)

DES = Dissociative Experience Scale NPSLE = neuropsychiatric systemic lupus erythematosus. *Dissociative fog is question 28 of the DES-II

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.424

POS0710 ANALYSIS OF 5-YEAR HOSPITALIZATION DATA OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: DAMAGE IS A RISK FACTOR FOR FREQUENT AND LONGER STAYS

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Background: The rates of hospitalization in patients with SLE is around 10% per year.¹

Objectives: In this study, we aimed to examine the hospitalization data of patients with SLE in the last 5 years at our center and determine the factors that affect hospitalization.

Methods: Hospitalization data of patients with SLE (2012 SLICC classification) admitted to our rheumatology ward between January 2015 and 2020 were analyzed. Cumulative clinical and laboratory findings were retrieved from the existing SLE database and revised. SLICC SLE damage index (SDI), and the disease activity at admission were determined (SLEDAI-2K).

Results: Eighty-six % (n=138) of 161 hospitalized patients were female. The mean age of the patients was 38 ± 13 years whilst mean duration of disease was 97.3 ± 96.9 months. Thirty-eight% of the patients were hospitalized more than once and the mean number of hospitalizations was 1.8 ± 1.5. The mean hospitalization duration covering all stays for each patient was 25 ± 27 days. Active disease followed by infection and damage-related complications ranked the first three among all causes of hospitalization.

Compared to patients hospitalized for active disease or other reasons, patients hospitalized for infection had a significantly higher number of readmissions (**p<0.05**) and their total duration of hospitalization was longer (**p<0.01**). Duration of disease was significantly shorter in patients hospitalized for active disease compared to patients hospitalized for infection and damage related causes (**p<0.05**).

The frequency of patients with damage and the mean SDI score was significantly lower in the group with active disease (68% and 1.9 ± 2) compared to patients hospitalized for infection (90% and 2.7 ± 1.6) and other causes (96% and 3 ± 1.7) (**p<0.05** for both). Distribution of damage according to organ/systems is presented in Graph 1. Highest frequency of damage was detected in the cardiovascular (30%), followed by neuropsychiatric (26.7%), renal (23%), pulmonary (23%) and musculoskeletal (20.5%) domains. A positive correlation was found between the mean SDI score and duration of hospitalization (**r=0.551, p<0.001**) as well as the number of hospitalizations (**r=0.393, p<0.001**). Regarding disease activity at the time of admission, the mean score of patients hospitalized for active disease was 11.0 ± 6.1 whilst was 3.2 ± 2.8 in patients hospitalized for infection and 2.9 ± 3.3 in patients hospitalized for other reasons (**p<0.001**). Renal active disease was the most common (44%), followed by hematological (34.8%), articular (21.7%) and mucocutaneous (21%) activity. Ten% of the patients all of whom had damage were admitted to intensive care unit (ICU). **Total hospitalization duration** (**p=0.012**), **mean SDI** (**p=0.008**), **antiphospholipid syndrome** (**p=0.033**), **lupus anticoagulant** (**p=0.010**), **thrombocytopenia** (**p=0.015**),