References:

[1] Lupus 2011; 20:125–130.
[2] Clin Rheumatol 2014; 33:1209–1215.
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FRI0274 MORFOLOGICAL INDEXES IN LUPUS NEPHRITIS – DO THEY HAVE PROGNOSTIC VALUE?

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Background: Lupus nephritis (LN) is a serious complication of systemic lupus erythematosus (SLE). With current therapies, a high remission rate is observed, this being the most important prognostic factor. Currently, therapy is guided by findings in the renal biopsy, following the ISN/RPS classification. Although recommended by EULAR, Austin and Hill's morphological indexes are not routinely obtained.

Objectives: To analyze the importance and applicability of the different morphological indexes in predicting response to treatment and prognosis.

Methods: Retrospective single center study of consecutive SLE and biopsy proven LN patients, diagnosed from 2010 to 2016. We evaluated the following outcomes: clinical remission, renal function and proteinuria at end of follow-up (FUP) (g/24h). Complete remission was defined as a reduction of proteinuria to <0.5g/24h, inactive urinary sediment and serum creatinine <115% of baseline; partial remission same parameters, except proteinuria <1g/24h if initial value <3h/24h, or reduction to <3g/24h if initial value >3g/24h. The studied predictors were the ISN/RPS LN classification and the morphological indexes described by Austin (Activity and Chronicity) and Hill, obtained after histomorphological review of renal biopsies. Statistical analysis was performed with STATA software.

Results: During 6 years, there were 46 biopsy-proven LN cases, 84.8% (n=39) woman, median 35 years old (27 – 42.5) and 57.6% (n=19) caucasian. 39 patients were already known to have SLE, 7.44 (1,13 – 12,3) years previously. The median FUP was 31,9 (13,2 – 45,6) months. Based on biopsy findings, 35 patients were started on immunosuppression – induction in 50% of cases with MMF and in 50% with cyclophosphamide; maintenance in 81% with MMF, the remaining with azathioprine. Complete remission was achieved in 58% of patients, 27% achieving partial remission. We observed 4 LN relapses. 96% (n=44) of the patients survived at the end of FUP, with a median serum creatinine of 0,8 mg/dl (0,7 – 0,99), eGFR 99,8 ml/min (71,2 – 116,8) and proteinuria of 0,6 g/24h (0,2 – 1,6).

We observed that Class IV patients had, at presentation, lower eGFR (67,3 vs 94,6 ml/min; p=0,02), higher proteinuria (4,26 vs 2,37; p=0,02) and a tendency towards higher C3 consumption (58,9 vs 77,4; p=0,06). We did not observe correlations between ISN/RNP Classification and the outcomes at the end of FUP. The correlations between clinical findings and morphological indexes (Hill and Austin) are summarized in table 1:

	Hill Biopsy Index		Activity Index		Chronicity Index	
	R	p	R	p	R	p
Anti-dsDNA (IU/ml)	0,2	NS	0,3	0,005	-0,07	NS
C3 (mg/dl)	-0,2	NS	-0,3	0,003	0,1	NS
C4 (mg/dl)	-0,2	NS	-0,3	0,004	0,1	NS
Presentation serum creatinine (mg/dl)	0,3	0,03	0,1	NS	0,3	0,03
Presentation eGFR (ml/min)	-0,5	0,01	-0,3	NS	-0,4	0,004
Presentation proteinuria (g/24h)	0,6	0,001	0,4	0,009	-0,3	0,006
End of FUP serum creatinine (mg/dl)	0,3	0,046	0,07	NS	-0,4	0,002
End of FUP eGFR (ml/min)	-0,2	NS	0,09	NS	-0,5	0,002
End of FUP proteinuria (g/24h)	0,4	0,02	0,2	NS	0,3	0,003

Both the Hill biopsy index and the Chronicity index were correlated with renal function and proteinuria at the end of FUP. The Activity index correlated with the immunological findings – C3, C4 and anti-dsDNA.

Conclusions: EULAR guidelines suggest that histomorphological evaluation in LN should go beyond ISN/RNP classification, and our data supports that – we observed a correlation between the renal outcomes and the indexes described by Austin and Hill.

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FRI0275 SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS WITH POSITIVES AUTOANTIBODIES WITH REMISSION OR LOW ACTIVITY EXHIBIT BOTH LOWER INTERFERON ALPHA AND INTERLEUKIN-10 LEVELS

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Background: Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by immune system disruption, including T and B cell activation and upregulation of autoantibody and immunocomplexes production that could damage different organs. Sometimes, patients with positives autoantibodies and serological manifestations show low disease activity or clinical remission. There is not enough information about persistent positive autoantibodies in absence of clinical activity neither the role of proinflammatory cytokines in this context.

Objectives: To assess the clinical and molecular differences in SLE patients with positives autoantibodies and with low clinical activity or in clinical remission compared to the group with clinical activity.

Methods: A cross-sectional, observational study of patients diagnosed of SLE according to SLICC 2012 criteria was performed. In these patients a complete blood-test was made, and clinical data by personal interview was collected. We analyzed the serum concentration of IL10, BLYS and INF1A by colorimetric methods. Biostatistical analysis was performed with R 3.3.2.

Results: We selected 130 SLE patients with serological manifestations (defined by RELESSER study) out of 142 SLE patients. 91 cases showed low activity or remission (SLEDAI<6) and 39 presented moderate or high activity (SLEDAI>6). SLE patients with positives autoantibodies without clinical activity showed significantly lower anti-dsDNA levels (P=0.006), lower complement consumption (P=0.003) and lower accumulated damage evaluated by SLICC score (P=0.041). No differences on time of evolution in both groups were observed. In addition, SLE patients with positives autoantibodies without clinical activity exhibit significantly lower levels of IL10 (P<0.001) and INF1A (P=0.019). No differences on BLYS levels in both groups were observed. Finally, SLE patients with positives autoantibodies with clinical activity present more mucocutaneous lesions (P=0.014), musculoskeletal manifestations (P=0.004), neuropsychiatric manifestations (P=0.002), renal manifestations (P<0.001) and lymphopenia (P=0.008) than patients with positives autoantibodies and without clinical activity.

Conclusions: In our series of SLE patients with both serological manifestations and low clinical activity have lower levels of IL10 and INF1A, compared to patients with high clinical activity. This result would suggest that differences in the cytokine levels are not related to autoantibodies presence but there are other mechanisms involved in cytokine production that would also be involved in maintenance of clinical remission.

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FRI0276 PREVALENCE OF DEPRESSION BY BECK II AND IMPORTANCE OF FATIGUE BY FACIT IV QUESTIONNAIRES IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS VS CONTROLS IN A SINGLE CENTER OF ARGENTINA

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Background: Estimated prevalence of neuropsychiatric symptoms in SLE is among 17 to 71%¹. Depressive symptoms are around 54%^{1,2}. Fatigue is frequently referred, predicts high morbidity and may be influenced by lifestyle and individual psychological characteristics¹.

Objectives: To evaluate the prevalence of depressive symptoms and its association with demographics and clinical variables in patients with SLE. To determine the predictive value of FACIT for fatigue in SLE vs controls.

Methods: Observational, retrospective case- control design. Patients ≥18 years old with SLE (ACR 97) were consecutively evaluated in our centre from January to July 2015. We analyzed age, disease duration, clinical manifestations, antibodies profile, SLEDAI (≥4 scored as active) and SLICC. We recorded familiar psychiatric diseases, educational and socioeconomic level (Graffar Scale), employment and marital status. Beck II and FACIT (IV version) questionnaires were used for evaluate depression and fatigue respectively. We tested two cut points for fatigue: <22 and <40 to determine sensitivity/specificity for this tool in SLE patients vs controls³. Continues data were compared using t Student and Mann Whitney. Categorical data: chi-square or Fisher's exact test by SPSS version 20.0. To predic fatigue we calculated the area under the curve by Receiver Operating Characteristic (ROC). Statistical significant= p<0.05.

Results: 77 SLE and 100 controls, all female. **SLE vs control group:** Mean of age ys: 34 (19–49)vs 38 (19–60). Prevalence of depression: 52% (44/77) vs 29% (29/100) (p<0.05). Prevalence of fatigue (FACIT<40): 42% (33/77) and 36% (36/100) (p>0.05). Mean disease duration (months) 48 (24–114). Socio-demographic characteristics, SLICC/SLEDAI, clinical and serological manifestations were not correlated with major depression p>0.05. **FACIT:** Median value: 31 (range 22–40) SLE group. **FACIT<22 total SLE:** 12/77 (15%) and **FACIT<40:** 33/77 (42%). **Cut points FACIT SLE vs controls:** <22: 15% (12/77) vs 1% (1/100) (p<0.05), 30% sensitivity/100% specificity, 100% PPV and 57% NPV. **AUC FACIT <22:** 0.65 (0.65–0.77). **FACIT <40 in SLE vs controls:** 42% (33/77) vs 26% (26/100) (p<0.05), 69% sensitivity and 84% specificity, 82% PPV and 70% NPV. **AUC FACIT <40:** 0.75 (0.64–0.87).

Conclusions: Prevalence of depression was high in our cohort and similar to

previously reported¹. Our patients showed low levels of SLEDAI/SLICC. There was not relation between activity levels and baseline damage with the presence of depression⁴. FACIT IV scale was a good independent predictor of fatigue in SLE patients with or without depression vs controls.

References:

- [1] L. Palagini M et al Depression and systemic lupus erythematosus: a systematic review. *Lupus* 2013.
- [2] Hugo FJ et al DSM-III-R classification of psychiatric symptoms in systemic lupus erythematosus. *Psychosomatics* 1996.
- [3] Lai JS et al Validation of the Functional Assessment of Chronic Illness Therapy-Fatigue Scale in Patients with Moderately to Severely Active Systemic Lupus Erythematosus, Participating in a Clinical Trial *Journal of Rheumatology* 2011.
- [4] Segui J et al Psychiatric and psychosocial disorders in patients with systemic lupus erythematosus: A longitudinal study of active and inactive stages of the disease. *Lupus* 2000.

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FRI0277 ANTI-SSA ANTIBODY STATUS IN COMBINATION WITH ULTRASOUND OF MAJOR SALIVARY GLANDS: A SHORTCUT IN THE CLASSIFICATION OF PRIMARY SJÖGREN'S SYNDROME?

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Background: Ultrasound of major salivary glands (sUS) is an upcoming diagnostic method to assess the involvement of major salivary glands in primary Sjögren's syndrome (pSS). In the AECG, ACR and recently published ACR-EULAR criteria, a positive salivary gland biopsy and/or presence of anti-SSA antibodies are necessary to classify a patient as pSS, while sUS is not included as a diagnostic item.

Objectives: To assess whether combining anti-SSA antibody status with sUS outcome can predict classification of patients as pSS in our inception cohort study.

Methods: Consecutive outpatients clinically suspected with pSS underwent sUS of the parotid and submandibular glands. Parenchymal echogenicity, homogeneity, hypoechogenic areas, hyperechogenic reflections and clearness of salivary gland border were scored according to the Hoyer scoring system (total score 0–48).¹ Positive sUS was defined as total score ≥ 15 . Patients underwent a diagnostic work up according to the AECG, ACR and ACR-EULAR criteria. We analyzed the predictive value of the combination of anti-SSA antibody status and sUS outcome for classification as pSS or non-pSS. Separate analyses were done considering either i) parotid gland biopsy or ii) labial gland biopsy as an item, when applying these classification criteria.

Results: Anti-SSA antibody status was positive in 53 (51%) patients and sUS was positive in 40 (39%) patients.

When parotid gland biopsy outcome was considered as an item of the criteria, 45 of 97 patients were classified as pSS according to the AECG, 44 of 97 according to the ACR and 52 of 99 according to the ACR-EULAR criteria. The combination of presence of anti-SSA antibodies with positive sUS showed a very high positive predictive value for classification as pSS (94–97%) and the combination of absence of anti-SSA antibodies with negative sUS highly excludes classification (negative predictive value 98–100%).

When labial gland biopsy outcome was considered as an item of the criteria, 49 of 96 patients were classified as pSS according to the AECG, 43 of 93 according to the ACR and 55 of 97 according to the ACR-EULAR criteria. The combination of presence of anti-SSA antibodies with positive sUS showed a high positive predictive value for classification as pSS (94–97%). However, the combination of absence of anti-SSA antibodies with negative sUS did not per se exclude classification (negative predictive value 89–93%).

Conclusions: In our prospective inception cohort study derived from daily clinical practice, the combination of presence of anti-SSA antibodies and positive sUS outcome highly predicts classification as pSS according to the AECG, ACR and ACR-EULAR classification criteria.

References:

- [1] Hoyer et al. *Rheumatology* (Oxford) 2005;44:768–72.

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FRI0278 PREVALENCE OF PRIMARY SJÖGREN'S SYNDROME IN A POPULATION-BASED COHORT IN THE UNITED STATES

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Background: Different studies worldwide reported highly discrepant estimates for

the prevalence of primary Sjögren's syndrome (pSS), ranging from 0.01% of the general population to more than 3%. No previous study reported the prevalence of pSS in the United States.

Objectives: To report the 2015 point prevalence of pSS in the first population-based study performed in the U.S.

Methods: Cases of all potential pSS patients living in Olmsted County, Minnesota on January 1, 2015 were retrieved using the Rochester Epidemiology Project resources, and ascertained by manual medical record review. Definite pSS cases were defined according to physician diagnosis. All patients with doubtful cases and all patients with an associated systemic autoimmune disease were excluded. The use of diagnostic tests was assessed and the performance of classification criteria in this community-based cohort was evaluated. The number of prevalent cases in 2015 was also projected based on 1976–2005 incidence data from the same source population.

Results: A total of 106 patients with pSS were included in the study: 86% were female, with a mean (SD) age of 64.6 (15.2) years and disease duration of 10.5 (8.4) years. A majority were anti-SSA positive (75%) and/or anti-SSB positive (58%), but only 22% met American-European Consensus Group or American College of Rheumatology criteria because the other tests required for disease classification were rarely performed in clinical practice (ocular dryness objective assessment, salivary gland functional or morphologic tests, or salivary gland biopsy). According to the physician diagnosis, age and sex adjusted prevalence of pSS was 10.3/10,000 inhabitants, but according to classification criteria this prevalence would be only 2.2/10,000. The analysis based on previous incidence data projected a similar 2015 prevalence rate of 11.0/10,000. Using figures from the 2015 general U.S. population census, a total of 248,000 patients with pSS (35,000 males and 213,000 females) would currently live in the country. If only cases fulfilling classification criteria are considered, there would be only about 53,000 prevalent cases of pSS in the U.S.

Conclusions: This study reports the first prevalence rate of physician-diagnosed pSS in a well-defined population in the U.S. The estimated prevalence of 10.3/10,000 inhabitants in 2015 is higher than previous results obtained in other geographical areas, probably due to different methodological designs of the studies. Because physicians rarely used tests included in the classification criteria to diagnose the disease in this community setting, current classification criteria do not reflect accurately the diagnosis of pSS in routine clinical practice.

Disclosure of Interest: None declared

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FRI0279 PREVALENCE AND FACTORS ASSOCIATED WITH PRECONCEPTIONAL COUNSELING IN WOMEN WITH AUTOIMMUNE RHEUMATIC DISEASES

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Background: Adequate prenatal counseling in women with autoimmune rheumatic diseases (ARDs) may help minimize maternal-fetal complications. However, the available information about the frequency and quality of prenatal counseling given to these patients is limited.

Objectives: To estimate the prevalence of preconceptional counseling and associated factors in women with ARDs.

Methods: A survey was conducted on socio-demographic data, gynecological-obstetric history, and domains related to preconception counseling in women with ARDs at the reproductive stage. It was defined as adequate preconception counseling if the patient knew that the pregnancy should be medically planned, that the complications are associated with severity/activity of the disease, that they should use an effective contraceptive method and that their medications may or may not be used during pregnancy. Descriptive statistics, Student's T test for quantitative variables with normal distribution, Mann-Whitney U test for non-normal and chi-square distribution were used for categorical or ordinal variables.

Results: Of a total of 146 surveys, 131 were analyzed. Only 49 (37.4%) patients received adequate preconception counseling. Two thirds of the patients had systemic lupus erythematosus (Table). The time of evolution of the disease was a factor associated with receiving adequate counseling (5.6 vs 3.6 years, $p=0.023$). Illness, marital status, and level of education were not factors associated with

	Adequate Counseling (n=49)	Inadequate counseling (n=82)	P value
Age (years) ^a	30.8±7.0	30.5±8.5	0.836
Time of evolution (years) ^b	5.6 (0.25–29)	3.6 (0.25–27)	0.023
Previous pregnancies ^b	1 (0–4)	1 (0–5)	0.192
Rheumatoid arthritis ^c	13 (26.5%)	18 (22%)	0.69
Systemic lupus erythematosus ^c	31 (63.3%)	52 (63.4%)	
Use of contraceptive method ^c	31 (63.3%)	44 (53.7%)	0.282
Use of embryotoxic/teratogenic drugs ^c	39 (79.6%)	34 (41.5%)	0.001
Counseling for a rheumatologist ^c	37 (75.5%)	28 (34.1%)	0.001
Counseling by other doctors ^c	35 (24.5%)	31 (65.9%)	0.197
Professional education ^c	23 (46.9%)	31 (37.8%)	0.616
Married ^c	15 (30.6%)	32 (39%)	0.774

^aStudent's t-test; ^bU of Mann Whitney; ^cChi square.