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FRI0271 PREVALENCE AND ASSOCIATED FACTORS OF DEPRESSIVE DISORDERS IN CHINESE PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

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Background: Psychiatric symptoms are common in patients with SLE. Most studies utilized self-rated scales of psychiatric symptoms for evaluation. Formal diagnosis of depression was not established by psychiatric interviews.

Objectives: To determine the prevalence of depressive disorders, severity of depressive symptoms and the associated clinical and socioeconomic factors in Chinese patients with SLE.

Methods: Patients who fulfilled ≥ 4 ACR criteria for SLE were randomly recruited from rheumatology out-patient clinics and hospital admission in a 9-month period. Psychiatric disorders were diagnosed by a direct interview with the psychiatrist using the Chinese-bilingual Structural Clinical Interview for DSM-IV Axis I disorders, patient research version (CB-SCID-I/P). The severity of depressive symptoms was assessed by the validated Chinese Hamilton Depressive Rating Scale (HAM-D). Patients were also asked to complete the Beck Depression Inventory (BDI), Medical Outcomes Study Social Support Survey (MOS-SSS-C) and the WHO Quality of Life Measure-Abbreviated Version (WHOQOL-BREF, BREF (HK)). SLE disease activity (SLEDAI), organ damage (SLICC/SDI) and socio-demographic were collected and correlated with the presence of psychiatric disorders. Logistic regression models were used to study the independent factors associated with depressive disorders and the severity of depressive symptoms.

Results: 175 SLE patients were studied (95% women, age 39.2 ± 12.4 years, SLE duration 10.3 ± 6.7 years). 27 (15%) and 37 (21%) patients were diagnosed with a current depressive (52% major depressive disorder, 22% dysthymia) or anxiety (35% generalized anxiety, 14% panic, 14% phobia, 8% adjustment) disorders, respectively. Patients with depressive disorders, as compared to those without psychiatric disorders, had more active SLE ($p=0.03$) and were more likely to have a history of psychiatric diagnosis ($p<0.001$) and financial assistance from Government ($p=0.04$). Independent factors associated with a depressive disorder were SLEDAI score ($1.13 [1.02-1.24]$; $p=0.02$), perceived poor social support ($p=0.03$) and a past history of psychiatric disorders ($p=0.003$). Age, disease duration and other socio-economic variables such as educational level and marriage status were not correlated with the presence of a depressive disorder. Being separated/divorced ($\beta=0.19$; $p=0.02$), having a higher SLEDAI score ($\beta=0.16$; $p=0.02$), SLE duration ($\beta=0.18$; $p=0.02$) and a past history of psychiatric disorders ($\beta=0.18$; $p=0.01$) were independently associated with higher HAM-D scores, which reflect more severe depressive symptoms. Depressive disorders and severity of depressive symptoms were significantly associated with poorer quality of life. ROC analysis showed that a cut-off of 14 points of the self-rated BDI had a sensitivity of 89% and a specificity of 83% for differentiating a current depressive disorder from those without.

Conclusions: A diagnosis of depressive disorders is prevalent in Chinese patients with SLE. Independent risk factors are more active disease, perceived poor social support and a past history of psychiatric disorders. Patients with more active SLE, shorter disease duration, a past history of psychiatric disorders and being separated were associated with more serious depressive symptoms. The self-rated BDI provides a good screening tool for identifying depressive disorders in SLE patients.

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FRI0272 EARLY DAMAGE ASSESSMENT AND PREDICTION OF DAMAGE ACCRUAL IN PRIMARY SJÖGREN'S SYNDROME USING SALIVARY GLAND ULTRASONOGRAPHY DURING 2 YEARS OF FOLLOW-UP

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Background: Early detection and prediction of glandular damage in primary Sjögren's syndrome (pSS) is of pivotal importance in patients' stratification and treatment. Recently, ultrasonography (SGUS) has appeared as a promising tool for the assessment of salivary gland involvement in pSS. However, few studies have specifically explored its role in the early identification of salivary gland damage and in monitoring disease progression over the follow-up.

Objectives: a) to explore the contribution of SGUS in the early assessment of pSS-induced glandular damage and in monitoring damage accrual during the follow-up b) to identify predictive factors associated with the development and progression of sonographic changes in salivary glands.

Methods: An inception cohort of 54 pSS (AECG 2002) patients was included in this study at the diagnosis and prospectively followed after 6, 12 and 24 months. Demographic, clinical data and the ESSDAI of the patients were collected at each study visit as well as SGUS score that was calculated every time by the

same radiologist. Sonographic assessment of glandular damage was performed by evaluating the size of the parotid and submandibular glands (normal/reduced) and the presence/absence of hyperechoic bands in more than 50% of the glands (i.e. fibrosis). Descriptive statistics and logistic regression were used for the data analysis.

Results: We included 54 patients (51F:3M) with a median duration of symptoms before diagnosis of 11 months (range 36–5 mo) and a median (IQR) ESSDAI at baseline of 5 (1–8). We found that at baseline 13 patients out of 54 (24.1%) already presented one element of damage in their SGUS evaluation, 14/54 (25.9%) more than one element of damage, whereas only 27/54 (50%) of patients did not present any sonographic sign suggestive for damage. In particular, hyperechoic bands were detected in the parotid glands of 12/54 (22%) patients and in the submandibular glands of 21/54 (38.9%); reduced parotid and submandibular gland size were described in 5/54 (9.3%) and in 10/54 (18.5%) of the cases, respectively. Predictive factors associated with sonographic salivary gland damage at the diagnosis were the ESSDAI at baseline (OR = 1.13 [95% CI 1.0 to 1.27], $p=0.04$) and the positivity for Rheumatoid factor (RF) (OR = 4.47 [95% CI 1.29 to 15], $p=0.02$). During the follow-up, 15/54 (27.8%) patients presented a progression of their salivary gland damage. We specifically observed a significant increase in the frequency of reduced parotid (9.3% vs 25.9%, $p=0.004$) and submandibular gland size (18.5% vs 33.3%, $p=0.008$) at the end of follow-up. Predictive factors for damage accrual during follow-up were: minor salivary gland focus score (OR = 3.5 [95% CI 1.1 to 10.6], $p=0.03$) and the ESSDAI at baseline (OR = 1.64, [95% CI 1.0 to 2.6] $p=0.03$).

Conclusions: Sonographic assessment of glandular damage apparently revealed a relative high frequency of already established signs of glandular damage in pSS patients at baseline, especially in patients with positive RF and higher ESSDAI. When routinely used, SGUS may accurately allowed to monitor damage accrual over the follow-up, ultimately contributing to a better clinical management of patients.

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FRI0273 ROLE OF PROCALCITONIN AND C-REACTIVE PROTEIN IN SCREENING OF INFECTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Previous studies revealed conflicting results regarding the role of procalcitonin in predicting infections in patients with systemic lupus erythematosus (SLE).

Objectives: This retrospective study aimed to analyse the role of procalcitonin (PCT) and C-reactive protein (CRP) in predicting infections in SLE patients, and to determine an optimal cut-off value for PCT and CRP for defining sepsis.

Methods: This study was carried out in one single tertiary centre. Adult patients (>18-year-old) with underlying SLE who were admitted to hospital between 1st Jan 2007 and 31st Dec 2015 were included. Demographic data, PCT and CRP upon admission, and other clinical parameters were obtained. Infection was defined by positive culture, or based on clinical and radiological evidence with subsequent response to antimicrobial treatments. Active SLE disease activity was defined by SLEDAI, and also by SLE-related manifestations not included in SLEDAI. Mann-Whitney test was used to test the difference between numerical parameters between patients with and without infection. Spearman's correlation was used to analyse the correlation between PCT and CRP. Receiver operating characteristic (ROC) curves were plotted to define an optimal cut-off values for PCT and CRP in infection.

Results: 33 (27 female & 6 male) SLE patients were included. Both mean and median age were 42-year-old. Among the 21 septic patients, 9 had active lupus and 12 had inactive disease. All but one of the 12 non-septic patients had active lupus. All 4 patients with underlying renal failure belonged to the infection group. There were 13 and 3 patients on immunosuppressive treatments in infection and non-infection groups respectively.

In patients with infection, mean PCT was 5.74ng/ml and mean CRP was 77.22mg/L. In those without, these were 0.29ng/ml and 20.04mg/L respectively. Both PCT ($p=0.014$) and CRP ($p=0.016$) levels were significantly higher in patients with infection than those without. There was no significant difference between the PCT and CRP levels in both septic patients (PCT $p=0.862$, CRP $p=0.247$) and non-septic patients (PCT $p=1.000$, CRP $p=0.500$) regardless of their SLE disease activity.

PCT level correlated positively with CRP level ($r=0.456$, $p=0.008$), but it had no correlation with age ($p=0.978$), gender ($p=0.424$), underlying renal failure ($p=0.304$), steroid ($p=0.053$) or other immunosuppressants ($p=0.132$) use.

ROC curves of PCT and CRP showed a similar area under curve (AUC) of 0.756 and 0.752 respectively. The cut-off for PCT was 0.78ng/ml (sensitivity 61.9%, specificity 91.7%), giving a positive predictive value (PPV) of 92.9%. The cut-off for CRP was 9.35mg/l (sensitivity 85.7%, specificity 66.7%), giving a PPV of 81.8%. Combining both PCT and CRP above their cut-offs, the specificity of predicting infection improved to 100% but the sensitivity worsened to 52%.

Conclusions: Both PCT and CRP were useful in predicting infection SLE patients regardless of their disease activity. The cut-off of PCT at 0.78ng/ml and CRP at 9.35mg/l gave satisfactory positive predictive value for infection.

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