The aim of this study was to evaluate the sensitivity and specificity of the ACR-EULAR 2019 criteria in a cohort of patients with connective tissue diseases residing in Argentina. Secondary objectives were to determine the Likelihood Ratio (LR) of these criteria and the correlation of their global score with activity and damage indexes of the disease.

Methods: Multicentre, retrospective and analytical study. Patients ≥ 18 years old with diagnosis of SLE (ACR 1997/SLICC 2012) without other associated collagen diseases (case group), and patients with other non-SLE connective tissue diseases (control group) were included. Those with active infectious disease, oncological disease, drug-induced lupus and overlap syndrome were excluded. Sociodemographic data, characteristics of the disease and treatment were recorded. In addition, activity and damage indexes were recorded in the group with SLE. Three SLE experts, blinded to the diagnosis, determined for every individual if the patient had SLE or another rheumatological disease. An interrater agreement of ≥ 75% (3 evaluations) was considered "defined SLE" and used as gold standard. In all cases, ACR 1997/SLICC 2012/ACR / EULAR 2019 criteria were applied and compared with the gold standard. Statistical analysis: Descriptive statistics was estimated. Sensitivity, specificity, positive and negative LR of the criteria were determined. The association between the final score of the ACR-EULAR 2019 criteria and the disease activity and damage indexes were estimated with Spearman correlation test. STATA 15.0 was used for data analysis.

Results: A total of 365 patients from 7 centres in Argentina were included. A One hundred and eighty-three belonged to the SLE group: 92.3% women, mean age 39 years (SD 13.3), median disease duration 92 months (IQR 37-150). The most frequent manifestations of the disease were mucocutaneous (94%), musculoskeletal (82.5%) and haematological (69%). All patients presented ANA +, 88% hypocomplementemia, 69.4% Anti-DNA and 19.5% antiphospholipid antibodies. Median SLEDAl and SLICC were 2 (IQR 0-6) and 0 (IQR 0-1), respectively. In the control group, 182 patients were recruited: 84% women, mean age 53.6 years (SD 14.2) and median disease duration 82.5 months (IQR 38-151). The most frequent diseases were Rheumatoid Arthritis (46.1%), Scleroderma (18.1%) and Sjögren's criteria for System (57.5%) and lupus. Common manifestations were musculoskeletal (81.9%), immunological (73.6%) and constitutional (25.3%). A total of 62.6% of patients presented ANA+, 8.6% hypocomplementemia, and 13% Antiphospholipid antibodies. Ninety-one percent of patients in the case group were classified as defined SLE and 3.8% in the control group.

The ACR / EULAR 2019 Criteria showed a 99.4% sensitivity and an 89.1% specificity, with a LR+ of 8.1 and a LR- of 0.007. The sensitivity and specificity of SLICC 2012 criteria were 98.3% and 88%, respectively with a LR+ of 8.2 and a LR- of 0.02; and the ACR 1997 criteria showed a 93.96% sensitivity and 90.1% specificity, with LR+ of 8.21 and LR- of 0.07. The correlations between the ACR/EULAR 2019 Criteria global score, and activity and damage indexes were 0.19 and -0.006, respectively.

Conclusion: The new ACR / EULAR 2019 criteria show high sensitivity, a specificity comparable to its predecessors, and a higher ability to distinguish SLE from other diseases and to exclude it in non-SLE patients. No correlation was observed between the criteria scores and activity and damage indexes.
Conclusion: A set of 18 QIs based on the EULAR recommendations for SLE was developed to be used towards improving care in SLE. Initial real-life data suggest variable degree of adherence with higher adherence resulting in reduced adverse outcomes.

REFERENCES:

Figure 1.

Review of the literature and EULAR 2019 Recommendations for SLE

Preliminary set of 44 QIs

Identification of level of evidence for each QI

Set of 44 QIs reviewed by a panel of experts

Experts scored each item for validity and feasibility using a 9-point scale

Analysis of each candidate QI using the RAND/UCLA Appropriateness Method

Revised set of 18 QIs based on median rating, median absolute deviation, lower limit inter-percentile range (IPR), upper limit IPR, Disagreement Index (DI) and expert’s comments for each QI,

Second and final re-rating round of the 18 revised QIs

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POS0765

LABORATORY RATIOS: A SUBROGATE BIOMARKER FOR DETECTION OF INFECTION IN SLE PATIENTS

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Background: The most common complication in patients with SLE is infection, and its clinical presentation is often indistinguishable from SLE flares. Therefore, laboratory ratios have been evaluated to differentiate between those events. Among them, ESR/CRP, neutrophil/lymphocyte (NLR) and platelet/lymphocyte (PLR) ratios have been previously assessed with acceptable performance; however, there is no validation of those ratios in our SLE population.

Objectives: To examine the predictive capacity of infection of the lymphocyte/C4 (LC4R), lymphocyte/C3 (LC3R), and ferritin/ESR (FER) ratios in SLE patients, and to evaluate the performance of ESR/CRP, NLR, AND PLR ratios in our SLE population.

Methods: We conducted a cross-sectional study of SLE patients admitted to the emergency service at Hospital San Vicente Fundación (HSVF). The HSVF ethics committee approved the execution of the project. Patients were categorized into four groups according to the main cause of hospitalization: (1) infection, (2) flare, (3) infection and flare and, (4) neither infection nor flare. We calculated the median values of the ratios and their respective interquartile ranges for each group. Then, we compared those summary measures using the Kruskal-Wallis test. Subsequently, we assessed the predictive capacity of infection of each ratio using ROC curve. Finally, we carried out a logistic regression model.

Results: A total of 246 patients were included, among them 90.7% were women. The median age was 28 years (IQR: 20-35 years). Regarding the outcomes, 37.0% of the patients had flares, 30.9% had neither infection nor flare, 16.7% had an infection and, 15.5% had simultaneously infection and flare. When compared the four groups, statistical significance (p<0.05) was observed. Area under the ROC curve (AUC) for infection prediction was as follows: 0.752 (sensitivity 60.5%, specificity 80.5%) for LC4R, 0.740 (sensitivity 73.2%, specificity 68.3%) for FER, 0.731 (sensitivity 77.6%, specificity 80.5%) for LC3R.

In the logistic regression modeling, we observed that an increase in the risk of infection was associated with an LC4R below 66.7 (OR: 6.3, CI: 2.7 – 14.3, p <0.0001), a FER greater than 13.6 (OR: 5.9, CI: 2.8 – 12.1, p <0.0001) and an LC3R below 11.2 (OR: 4.9, CI: 2.4 – 9.8, p <0.0001).

The ESR/CRP and PLR performed poorly with an AUC of 0.580 and 0.655, respectively. In contrast, the NLR showed better performance (AUC of 0.709, with a sensitivity of 80.2% and specificity of 55.7%).

Figure 1. ROC curves of the evaluated ratios

Conclusion: These laboratory ratios could be easy to assay and inexpensive biomarkers to differentiate between infection and activity in SLE patients. The LC4R, FER, and LC3R have a significant diagnostic performance for detecting infection among SLE patients. Of the ratios previously evaluated, ESR/CRP, LPR, NLR, only the latest has an adequate performance in our population.

REFERENCES:

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POS0766

CLUSTER ANALYSIS AND COMPARISON OF CUMULATIVE DAMAGE BY DIAPS IN A SINGLE CENTER COHORT OF APS PATIENTS

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Background: Evaluation of cumulative lupus damage is critical in predicting disease severity. The European League Against Rheumatism (EULAR) recommendations for systemic lupus erythematosus (SLE) patients were recently updated by the Center for Clinical Practice. The Center for Clinical Practice (CCP) provided a system of damage indices (DIAPS) for lupus patients. This study aimed to compare the cumulative lupus damage of SLE patients using the CCP and the SLE Damage Index (SLEDI) and to evaluate the differences between both scores.

Methods: A retrospective study was conducted in a single center from September 2018 to May 2019. The study included 88 SLE patients. All patients fulfilled the American College of Rheumatology criteria for SLE. The cumulative damage scores of the patients were calculated using both the CCP and the SLEDI. The differences between the two scores were analyzed using the paired-samples t-test.

Results: The mean cumulative damage score calculated using the CCP was 0.35 ± 0.71, while the mean cumulative damage score calculated using the SLEDI was 0.27 ± 0.54. The difference between the two scores was statistically significant (p < 0.05).

Conclusion: The CCP and the SLEDI provided different cumulative damage scores for SLE patients. Further studies are needed to determine the clinical implications of these differences.