Assessment (PGA) (0-3 points, 10 cm scale), SLEDAI-2K and SLE-DAS. A senior rheumatologist expert in SLE, blinded to the disease activity scores, classified each patient in 1 of 4 categories: (i) remission, (ii) low disease activity (LDA), (iii) mild disease activity and (iv) moderate/severe disease activity. The best cut-off values of SLE-DAS to define these categories were estimated using Receiver Operating Characteristic (ROC) curve analysis. Accuracy, precision, sensitivity and specificity values for these cut-off values were then calculated. The agreement between the SLE-DAS and physician’s classification was measured using Kappa coefficient. Statistical significance was set at 0.05.

Results: We included 221 patients (84.2% female, mean age of 45.4 ±13.5 years, mean disease duration of 15.4±9.5 years). In this preliminary study, the proposed cut-off values of SLE-DAS to define each disease activity category were: remission SLE-DAS≤2.08, LDA 2.08≤SLE-DAS≤3.77, mild disease activity 3.77<SLE-DAS≤7.64, and moderate/severe disease activity SLE-DAS>7.64 (Table 1). The overall accuracy of these SLE-DAS cut-off values to identify each disease activity state was 96.4%. The agreement between SLE-DAS and physician’s classification was very high (k=0.925, p<0.001). Distribution of SLE-DAS and SLEDAI-2K scores in each disease activity state is presented in Figure 1. According to the SLE-DAS cut-offs, 68.8% of the patients were in remission, 2.3% in LDA, 10.9% in mild disease activity and 18.1% in moderate/severe disease activity.

Abstract THU0267 – Table 1. Performance of SLE-DAS to assess each disease activity state.

<table>
<thead>
<tr>
<th>Disease activity state</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>Precision (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remission (SLE-DAS≤2.08)</td>
<td>99.3</td>
<td>97.1</td>
<td>98.7</td>
</tr>
<tr>
<td>Low Disease Activity (2.08≤SLE-DAS≤3.77)</td>
<td>66.7</td>
<td>99.5</td>
<td>80</td>
</tr>
<tr>
<td>Mild Disease Activity (3.77&lt;SLE-DAS≤7.64)</td>
<td>88.0</td>
<td>99.0</td>
<td>91.7</td>
</tr>
<tr>
<td>Moderate/Severe Disease Activity (SLE-DAS&gt;7.64)</td>
<td>94.9</td>
<td>98.4</td>
<td>92.5</td>
</tr>
</tbody>
</table>

Conclusion: The SLE-DAS has a high precision in identifying remission, LDA, and other disease activity states in SLE. These results suggest that the SLE-DAS is an accurate tool in defining achievable targets in SLE management.

Abstract THU0267 – Figure 1

REFERENCES:

Disclosure of Interests: None declared
circulating immune complexes (CICs) have been described in SLE but the relationship with disease activity in our multi-ethnic Asian patients remains unclear.

Objectives: To determine the correlation between disease activity and the levels of CICs, serum and urine IL-6 in a Singapore cohort of multi-ethnic Asian SLE patients.

Methods: Serum levels of CICs, IL-6 and urine IL-6 were measured in 88 SLE patients using C1q-C1q and high sensitivity IL-6 ELISAs. All patients fulfilled the 1997 revised American College of Rheumatology (ACR) classification criteria. Clinical and laboratory manifestations, therapy, disease activity and damage at the time of sample collection was collected. Disease activity was scored with the SLE Activity Measure-revised (SLAM-R) and damage with the ACR/Systemic Lupus International Collaborating Clinic SLE damage index (SDI). The correlation between disease activity score and CICs, serum and urine IL-6 were assessed using Spearman's correlation. Receiver operator characteristic (ROC) curve analysis was performed to assess the performance of the individual biomarkers in discriminating SLE disease activity.

Results: The cohort of 88 patients were predominantly female (n = 78, 89.6%), with a mean age of 40 years±13.1. The majority were of Chinese ethnicity (n = 73, 83%), 13% were Malay (n = 11) and 4 individuals were of other races. The mean disease duration was 98.4 months ± 86.4. The mean scores of SLAM-R and SDI were 2.9 ± 2.2 and 0.9 ± 0.9 respectively. SLE disease manifestations at the time of sample collection included mucocutaneous involvement (5.7%) and active urine sediment (28.7%). 77% had hyponoclematemia and 70.1% had elevated titers of anti-dsDNA antibody. The majority were on corticosteroids (75.9%) and hydroxychloroquine (65.5%). Immunosuppressive drugs included azathioprine in 37.9%, mycophenolate in 6.9%, intravenous pulse cyclophosphamide in 6.9% and cyclosporin in 1 patient. There was significant positive correlation between SLAM-R and serum CICs (R = 0.4121, p < 0.01), serum IL-6 (R = 0.4227, p < 0.01) and urine IL-6 (R = 0.3142, p = 0.01). Based on the area under the curve(AUC), CICs and urine IL-6 were better in discriminating active SLE (AUC 0.8002, p < 0.01 and AUC 0.7397, p < 0.01 respectively) compared to serum IL-6 (AUC 0.5554, p = 0.1718).

Conclusion: Our study observed significant correlation between levels of serum circulating immune complexes, serum and urine IL-6 with SLE disease activity in our multi-ethnic Asian patient cohort. ROC curve analysis suggests that serum CICs and urine IL-6 may serve as serum biomarkers to identify SLE patients at risk of flares.

REFERENCE:


THU0270 THE BURDEN OF CHRONIC KIDNEY DISEASE IN SYSTEMIC LUPUS ERYTHEMATOSUS: A NATIONWIDE EPIDEMIOLOGIC STUDY

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Background: Clinical-epidemiological research has advanced our knowledge on the negative impact of lupus nephritis (LN) on systemic lupus erythematosus (SLE) outcomes. Impaired renal function (LN) diagnosis and failure to normalize renal function upon aggressive immunosuppressive therapy are associated with a very poor long-term renal outcome. Most reports on that field are however based on tertiary care data. We evaluated the activity of TGF-β in serum of patients with pSS and to show its significant relationships with other cytokines active in the pathogenesis of this syndrome.

Methods: 39 patients with pSS (according to current EULAR/ACR criteria) were included into the study, female 28 (85%), men 5 (15%), mean age 47± SD=16. Routine laboratory tests (blood morphology, ESR, CRP, rheumatoid factor) were performed along with ophtalmological assessment (Schirmer’s test, ocular staining score) with confirmation of dry eye. Patients had routine chest X-ray and, in case of clinical indications, high resolution computed tomography to assess interstitial changes. Serum concentrations of TGF-β were determined using an Quantikine ELISA Kit. Serum cytokines levels of BAFF, APRIL, FLT-3L, LT-α, IL-21, TNF-α were evaluated using standard ELISA assays. Levels of antinuclear antibodies (IF;HEp-2000) was measured; presence of anti-SS-A and anti-SS-B antibodies was determined by semi-quantitative immunoblotting evaluation. Biopsy of minor salivary gland with the histopathological evaluation (focus score-FS) and the immunochemistry (CD3 +, CD4 +, CD19 +, CD21 +, CD35 + cells) was performed. Statistics: differences between groups were analyzed using the Mann-Whitney test (continuous variables). Correlations between quantitative variables were assessed with the Spearman correlation coefficient. Statistical significance p<0.05. The study was approved by the ethics committee.

Results: The negative correlation (rho = -0.472) between TGF-β and TNF-α was demonstrated. There was no correlation between TGF-β and other tested cytokines or autoantibodies (ANA, anti -SS-A, anti-SS-B). There was no correlation between TGF-β and results of ocular examinations, FS and immunochemistry. There was no correlation between TGF-β and lung involvement, especially fibrosis, in this group.

Conclusion: i) results may indicate that TGF-β, influences the serum TNF-α activity in pSS patients, ii) our findings suggest, that TGF-β may