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AB0491 THE PERFORMANCE OF A RENAL ACTIVITY INDEX IN LUPUS NEPHRITIS IN INDUCTION THERAPY

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Background: Renal involvement in systemic lupus erythematosus (SLE) is associated with high morbidity and mortality¹. Current standard tools to monitor lupus nephritis (LN) are suboptimal compared to the invasive renal biopsy². The renal activity index in lupus (RAIL) was developed using 6 urinary biomarkers to reflect disease activity. In children this tool was 92% accurate in identifying active LN³.

Objectives: We aim to study the changes in this score in relation to induction treatment in LN.

Methods: Urine samples were collected from active LN patients prior to induction treatment for LN and serially afterwards, coinciding with clinical visits. Luminex Bead Multiplex Assay was used for the analyses of urine biomarkers included in the RAIL score (neutrophil gelatinase-associated lipocalin, ceruloplasmin, monocyte chemoattractant protein-1, adiponectin, hemopexin, kidney injury molecule-1). RAIL scores were calculated per the defined algorithm for each urine sample. Data collected include LN histologic classification (International Society of Nephrology (ISN)/Renal Pathology Society (RPS) classification system), renal SLE disease activity index (rSLEDAI) score and type of therapy.

Results: At the time of the analysis, data from 6 active LN patients were collected longitudinally. Patients were all females and all had class IV LN per the ISN/RPS. Renal SLEDAI scores were on the higher end ($M=11.3$, $SD=3.9$). All patients were started on intravenous (IV) methylprednisolone and cyclophosphamide (CYC) therapy. All but one patient completed 6 doses of monthly CYC before switching to oral mycophenolate mofetil therapy. The RAIL scores for the 6 patients ranged between -1.8 and 3.29. All patients had reductions in their RAIL score at 2-3 months period at an average of 322% decline from baseline (Figure 1). At the end of induction treatment or at the 5-6 months interval, 5/6 samples were available for analysis and showed that 4/5 patients maintained a decline of RAIL scores below the baseline. Of note the patient with higher RAIL score at the end of treatment had only 3 monthly doses of CYC. All rSLEDAI scores decreased between baseline and the 6 months interval. However, one patient with known medication non-adherence had a flare of LN at the 6 months point leading to increased rSLEDAI.

Conclusion: RAIL scores show overall improvement from baseline with LN induction therapy. Lack of improvement was associated with flare of disease. Additional data points and a larger study sample are required to study the ability of the RAIL score to reflect clinical improvement of LN.

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Appendix:

Changes in the RAIL Score with LN Induction Therapy

Figure 1. Changes in the RAIL score from baseline, at 2-3 months and at 5-6 months in 6 patients with LN. Baseline value is assigned 100%.

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AB0492 PREVALENCE OF IGA ANTICARDIOLIPIN ANTIBODY AND ITS ASSOCIATION WITH PREGNANCY MORBIDITY IN ASIAN INDIAN PATIENTS WITH PRIMARY ANTIPHOSPHOLIPID ANTIBODY SYNDROME AND SYSTEMIC LUPUS ERYTHEMATOSUS – A CROSS SECTIONAL STUDY

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Background: There are many clinical and laboratory parameters which have been proven to be associated with increased risk of pregnancy morbidity in patients with SLE and APS. This study was undertaken as there is a lacuna in explaining all the pregnancy related morbidity in this group

Objectives: Primary: Correlation of IgA anticardiolipin antibody with the risk for pregnancy morbidity in patients with APS/SLE

Secondary: Association of IgA Anticardiolipin antibody with the risk of thromboembolic events

Methods: Patients diagnosed as SLE and/or Primary APS who are married and conceived atleast once were recruited and 3ml blood sample was obtained from them. Patients with history of recurrent infections, which could suggest probable IgA deficiency, were excluded. Demographic data including duration of illness, number of pregnancies, thromboembolic events, disease activity were noted. They were categorized into two different groups depending on whether they had a pregnancy morbidity or not. The blood samples were subjected to IgA Anticardiolipin assay by ELISA.

Results: A total number of 186 patients were recruited with mean age 34.54(+/-7.32)years, mean duration of illness of 5.52(+/-4.31) yrs with a diagnosis of 76.88% SLE, 7.53% primary APS and 15.59% SLE with secondary APS. On assessment of disease activity, mean SLEDAI score was found to be 4.46+/-6.32. Out of the total, 14.71% patients had conceived once, 14.56% twice, 16.72% patients thrice and 18.41% had conceived more than three times. 36.56% patients had pregnancy morbidity (majority being pregnancy induced hypertension 14.52%, prematurity 11.29%, IUGR 10.22%, pre-eclampsia in 3.76%, eclampsia 1.08%), 19.35% patients had history of thromboembolic events (6.45% pulmonary embolism, 5.38% deep vein thrombosis, 3.76% visceral vessel thrombosis, 0.54% cortical vein thrombosis, 6.99% other vessel thrombosis). 33.87% patients had positivity for antiphospholipid antibodies with 27.82% lupus anticoagulant positive, 20.97% IgG Anticardiolipin positive and 17.35% anti-beta2 glycoprotein positive. IgA Anticardiolipin was found to be positive in 4.84%(n=9) out of which, 10.29% were in the group with pregnancy morbidity as against 1.69% without pregnancy morbidity. Out of the total positives titre in 37.5% were indeterminate, 25% low positive and 37.5% high positive. All patients who had high titre positivity had pregnancy morbidity. The positivity of IgA anticardiolipin in the patient group with thromboembolic events was 5.56%.

IgA Anticardiolipin	Pregnancy morbidity	No pregnancy morbidity
Positive	7(10.29%)	2(1.69%)
Negative	69(89.71%)	116(98.31%)