TITLE OF THE ABSTRACT: Urinary VCAM -1 as a renal disease activity indicator and lifestyle factors affecting the disease activity in lupus nephritis.

DEPARTMENT: General Medicine

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OBJECTIVES:

- To study the utility of urinary levels of VCAM-1 in lupus nephritis.

- To study the association between lifestyle factors and disease activity of lupus nephritis.

METHODOLOGY: It was a diagnostic case control study. The patients presenting to Medicine, Nephrology and Rheumatology OPD were recruited into this study. Patients were divided into 2 groups, SLE without active nephritis and SLE with active nephritis based on the renal SLEDAI. Urinary VCAM1 was tested in all patients using an early morning spot urine sample. Renal biopsy was done in those patients with active nephritis. All patients underwent a lifestyle assessment including dietary, stress and physical activity.VCAM1 levels were compared with the renal SLEDAI, renal biopsy disease activity and standard of care markers. The lifestyle factors were also compared with the disease activity.The results were analyzed using SPSS software version 16. A 2x2 analysis for the diagnostic test was done. The validity and predictive value statistics was presented with 95 percent confidence interval. As VCAM1 provides levels, the best cut off was identified using ROC analysis. The risk

factor analysis for the nutritional intake was done using multivariate regression analysis.

RESULTS: Out of 83 patients, 74 patients were taken up for final analysis. Urinary VCAM 1 levels had significant correlation (p=0.01) with disease activity based on renal SLEDAI. However, the correlation between the biopsy findings and VCAM levels was not statistically significant. The sensitivity and specificity of urinary VCAM 1 is 65.22% and 75% respectively. The cut off value of urinary VCAM 1 is 23.8 pg/mg of creatinine.

Stress was found to be statistically significant in active nephritis (p value <0.001). The positive predictive value was 55% and negative predictive value was 81%.