PRESENCE OF RHEUMATOID FACTOR WAS ASSOCIATED WITH A DECREASED RISK OF LUPUS NEPHRITIS IN PATIENTS WITH JUVENILE SYSTEMIC LUPUS ERYTHEMATOSUS

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Background Estimated 10-20% of all patients with systemic lupus erythematosus (SLE) develop clinical disease before the age of 18 years and are therefore classified as juvenile-onset SLE (JSLE). JSLE is characterised by a higher prevalence of lupus nephritis, compared to adult-onset SLE. Chronic kidney disease (CKD) refers to a state of irreversible kidney damage and/or reduction of kidney function that is associated with progressive loss of function over time. Lupus nephritis does not always lead to CKD. However, when it does it is associated with increased morbidity and mortality.

Objectives We aimed to identify clinical and laboratory predictors of CKD development in JSLE patients by comparing the baseline characteristics of JSLE patients with and without CKD to ascertain if there are any significant differences between the two groups.

Methods This is a single-centre retrospective study, who included patients reviewed in our young adult and adolescent clinics. Mann-Whitney U or Chi-square test were performed to compare the characteristics between the patients with and without CKD. We used the Pearson’s (r) or Kendall’s t (tau) correlation to examine if there is any association between the CKD and the baseline characteristics.

Results We identified 44 JSLE patients, out of which 17 (39%) fulfilled the diagnostic criteria for CKD at their last clinical review. The stages of CKD varied from 2 to 5. All patients with CKD had lupus nephritis, while 5/44 patients (11%) had lupus nephritis without CKD. The baseline characteristics are detailed in the table 1 below. There were statistically significant differences in the treatments used for patients with and without CKD. As expected, the highest dsDNA levels were higher in patients with CKD (p=0.03). There was also a positive moderate correlation (r=0.32) between raised levels of dsDNA and the development of CKD (p=0.008). We also found a negative moderate correlation (τ=-0.439) between the presence of RF and CKD (p=0.04).

Conclusion Acknowledging the limitations posed by this small study, we identified a negative moderate correlation between the presence of RF and CKD, which has also been reported in the literature before. We cannot conclude that RF exerts a protective effect against renal disease in SLE, because of the many confounders that might account for a decreased RF in JSLE. Further research using a large JSLE cohort enabling multivariate logistic regression is recommended. DsDNA antibody levels are a measure of disease activity in lupus nephritis and therefore this might explain why patients who developed CKD were noted to have higher anti-dsDNA levels, in comparison with the patients who did not develop CKD.