

Poster presentation

Pediatric lupus nephritis: impact of ethnicity on histological subtype and initial presentation

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from 15th Paediatric Rheumatology European Society (PreS) Congress
London, UK. 14–17 September 2008

Published: 15 September 2008

Pediatric Rheumatology 2008, **6**(Suppl 1):P233 doi:10.1186/1546-0096-6-S1-P233

This abstract is available from: <http://www.ped-rheum.com/content/6/S1/P233>

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Objective

1) To determine the association between ethnicity and lupus nephritis (LN) subtype, 2) To compare clinical and laboratory characteristics of LN subtypes.

Methods

A single-center cohort study of all consecutive patients <18 years of age with biopsy proven LN diagnosed in 1980–2006 was performed. Self-designated ethnicity, clinical and laboratory features including renal function, urinalysis and overall activity (SLEDAI) were recorded. Associations of ethnicities, LN subtypes, clinical and laboratory variables were tested using chi-squared analysis, t-test and ANOVA; Bonferroni and Tukey correction were used for all multiple comparisons.

Results

150 LN patients were included in the study; 81% females, mean age 12.9 years (SD = 3.1). 44 children were Caucasian, 45 Asian, 22 South Asian, 30 Black and 9 of other ethnic origin. Diffuse proliferative LN (DPGN) was seen in 38%, focal proliferative LN (FPGN) in 31%, membranous LN in 17% and mesangial LN in 14%. All ethnic groups had similar proportions of all LN subtypes. Disease activity (SLEDAI) at the time of LN diagnosis was highest in patients with DPGN. Nephrotic range proteinuria was significantly more common in DPGN than in FPGN or mesangial LN, but not membranous LN. Patients with DPGN presented significantly more frequently in renal failure as compared to mesangial or membranous LN, but not FPGN.

Conclusion

Ethnicity does not influence the LN subtype. Renal failure is present in 1/3 of patients with DPGN and FPGN at diagnosis. Of all LN subtypes, DPGN at presentation was associated with the highest disease activity, nephrotic range proteinuria and renal failure.