

Factors associated with time to severe lupus nephritis in a cohort of Colombian patients

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Background:

Systemic lupus erythematosus (SLE) clinical manifestations, and their severity, vary according to age, ethnicity, and socioeconomic status. Hispanic and Afro-Americans have a higher incidence, and more severe presentations when compared to Caucasian patients with SLE.

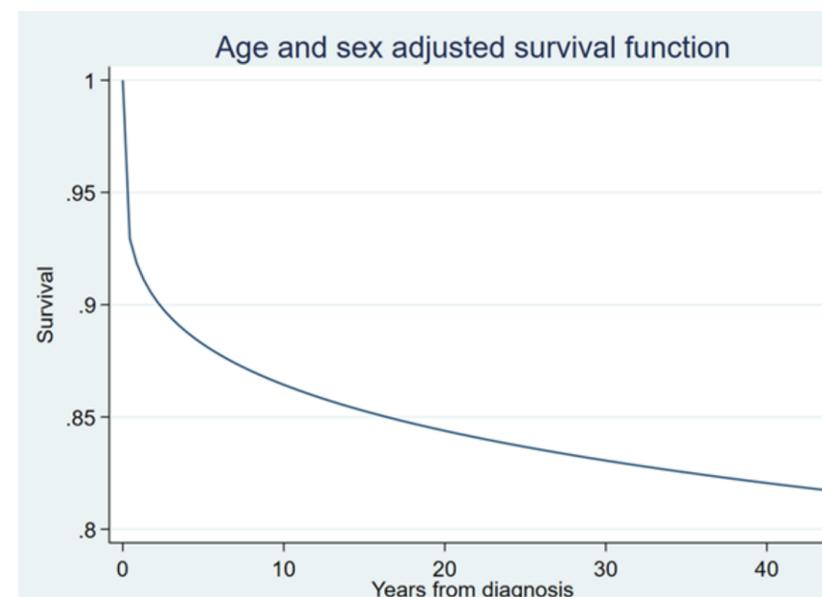
Objectives:

To analyze clinical and immunological characteristics associated with time to severe renal involvement in patients with SLE in a Colombian cohort followed for one year, between January 2015 and December 2018.

Methods:

Retrospective follow-up study based on clinical records. Patients with SLE that fulfilled either 1987 American College of Rheumatology Classification Criteria for SLE or 2011 Systemic Lupus International Collaborating Clinics (SLICC) classification criteria for SLE. We included patients with a diagnosis of lupus nephritis, according to the Wallace and Dubois criteria.

Patients who did not have at least two follow-up measurements or had a cause of nephritis other than lupus were excluded. The main outcome was set as the time from diagnosis to severe renal involvement defined as creatinine clearance ≤ 50 ml/min, or 24-hour proteinuria ≥ 3.5 gr or end-stage renal disease. We analyzed clinical and immunological characteristics. Descriptive statistical analyses data are reported as frequencies and percentages for categorical variables, and as medians and inter-quartile ranges (IQR) for quantitative variables. Age and sex-adjusted the survival functions and Hazard ratios (HR) with 95% confidence intervals, and p-values were estimated using parametric Weibull models for interval-censored data. P values < 0.05 were considered statistically significant.



Results:

548 patients were analyzed 67 were left-censored as they presented renal involvement at entry, 6 were interval censored as the outcome occurred between the study visits, and 475 were right-censored as the renal involvement was not registered during the follow-up. 529 (96.5%) patients were female, median age at entry was 46 (IQR = 23) and median age to diagnosis was 29.5 (IQR = 20.6). 67% were mestizo, 13% Caucasian and 0.3% Afro-Colombian. Age and sex-adjusted variables associated with time to severe lupus nephritis were high blood pressure HR = 3.5 (95%CI 2.2-5.6; p-value < 0.001) and Anti-RO (per unit increase) HR = 1.002 (95%CI 1.001-1.004; p-value = 0.04). Figure 1 shows the age and sex-adjusted survival function.

Conclusion:

In our cohort, the events of severe lupus nephritis occur in less than 15% of patients at 10 years. Both high blood pressure and elevated anti-Ro titers were associated with a higher rate of onset in the presentation of severe lupus nephritis, as seen in some polymorphisms of anti-Ro