PREDICTORS FOR LUPUS NEPHRITIS OF AN OUTPATIENT CLINIC AT PARANA'S INTERIOR CITY

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BACKGROUND

Systemic lupus erythematosus (SLE) may result in organs dysfunction, such as the kidney. In Brazil, there are few cohorts exploring lupus nephritis (LN). Therefore, the present study aimed to compare the main differences between patients with SLE with and without LN attended in a university hospital of southern Brazil and to identify the main indicators for the occurrence of nephritis.

MATERIALS AND METHODS

This study is a retrospective cohort analysis. We reviewed the records of patients with a diagnosis of SLE seen in the Department of Rheumatology at a south region's hospital in Brazil, from January 2010 to September 2018. Patients were divided into two groups to compare and detect demographic, clinical and treatment response differences between lupus with and without nephritis. Multivariable logistic regression analysis was performed to determine the best model of independent predictors for renal involvement. Continuous data were described as median and interquartile range (IQR) and categorical variables as percentages. To compare proportions of categorical variables, were used the Pearson chi-square test or Fisher's exact test. For continuous variables, normality was analyzed with Shapiro-Wilk test and comparison for 2 samples was done using Mann-Whitney U test.

RESULTS

Patients with LN had a shorter follow-up from disease diagnosis (p <0.0001), higher prevalence of hypertension (67.4% x 20%, p<0.0001), low complement (67.4% x 20%, p=0.003), anti-dsDNA positive (67.4% x 32.5%, p=0.006), erythrocyte sedimentation rate (ESR) and c-reactive protein (CRP) levels (p=0.008, p=0.01) and lower prevalence of joint manifestations (67.4% x 35%, p=0.01), hemoglobin (HB) and vitamin D (VD) levels in univariate analysis. In multivariate analysis, factors associated with nephritis were diagnosis before age 18, low complement levels, high CRP and 24-hour proteinuria (P24H) levels (p=0.009; p=0.006; p=0.004; 0.003).

CONCLUSION

Therefore, young or patients with low complement levels, higher values of CRP and P24H should be carefully monitored for the development of LN. Further studies are needed to determine whether low levels of VD and HB may also be considered predictors of nephritis.