END-STAGE RENAL DISEASE IN 1528 CHILDHOOD-ONSET SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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BACKGROUND

Childhood-onset systemic lupus erythematosus (cSLE) is a multisystemic inflammatory autoimmune disease, usually more severe than in adults, affecting major organs and systems, with different disease presentations, leading to increased morbidity and mortality rates. The study aimed to evaluate end-stage renal disease (ESRD) in a large sample of cSLE patients and to assess its association with clinical and laboratorial characteristics, disease activity, damage accrual, treatment, outcome, and survival.

METHODS

This nationwide observational study was carried out in 27 Brazilian pediatric rheumatology centers, and includes 1528 cSLE patients. In this study, we also investigated cumulative risk factors for ESRD in cSLE patients.

RESULTS

A total of 59/1528 (3.9%) of patients presented ESRD. After Bonferroni's correction for multiple comparisons ($p < 0.0013$), determinants significantly associated with ESRD were urinary biomarkers abnormalities, neuropsychiatric involvement, higher scores of SLEDAI-2K at last visit and SLICC/ACR-DI and its renal domain, as well as the use of intravenous methylprednisolone, oral cyclosporine, intravenous cyclophosphamide, and rituximab. In the regression model analysis, arterial hypertension (HR = 15.42, 95% CI = 6.12–38.83, $p \leq 0.0001$) and biopsy-proven proliferative nephritis (HR = 2.83, 95% CI = 1.70–4.72, $p \leq 0.0001$) increased the risk of ESRD.

CONCLUSION

This study showed that cSLE patients with arterial hypertension and biopsy-proven proliferative nephritis exhibited higher hazard rates of progression to poor outcomes. Therefore, those patients could benefit from strict blood pressure control during follow-up, and optimal treatment for lupus nephritis.

KEYWORDS

Systemic lupus erythematosus, Lupus nephritis, End-stage renal disease, Outcome, Childhood.