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NEUROPSYCHIATRIC SLE (NPSLE) IN CHILDREN AND ADOLESCENTS WITH LUPUS NEPHRITIS

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Objectives : The aim of this study was to evaluate the characteristics, associated factors and outcomes of NPSLE in Chinese children and adolescents with cLN.

Methods : We conducted a retrospective cohort study of biopsy-proven cLN diagnosed from 2000 to 2021 to investigate the epidemiology, clinical characteristics, associated risk factors and outcomes of neuropsychiatric systemic lupus erythematosus (NPSLE) in the presence of cLN. NPSLE was defined according to the 1999 ACR criteria.

Results : Ninety-five Chinese children with biopsy-proven cLN were included in the analysis. Of these patients, a total of 31 NPSLE events were reported in 11 patients (12%), with one patient developed NPSLE before the onset of cLN, four and six patients developed NPSLE concurrently with and after the onset of cLN, respectively. The most frequent NPSLE event was seizure (n=12, 39%). Estimated glomerular filtration rate <30ml/min/1.73m² at diagnosis of LN (OR_{adj} 6.73, 95% CI 1.29-35.11) and higher maximal proteinuria during the observation period (OR_{adj} 1.07, 95% CI 1-1.13) were predictive of NPSLE upon multivariable analysis. Compared to children with LN who did not develop NPSLE, significantly more children who developed subsequent NPSLE flare following initial kidney involvement had a history of medication non-adherence (100% vs 25%, p<0.001), higher degree of proteinuria at the diagnosis of LN (urine protein/creatinine ratio, 5.74 vs 2.35mg/mg, p =0.04) and during the entire observation period (urine protein/creatinine ratio, 13.2 vs 3.3mg/mg, p = 0.004). Patients with NPSLE had a significantly lower complete remission rates for LN at 6- and 12-month post-induction (27.3% vs 70.2%, p = 0.014 ; 45.5% vs 83.3%, p =0.01, respectively). Kaplan-Meier analysis showed that patients with NPSLE had worse kidney and patient survivals (log-rank test, p <0.001)

Conclusions : Worse kidney and patient survivals are observed in cLN patients with NPSLE. Severe LN manifestation and medication non-adherence are associated with the development of NPSLE