

Outcome and Factors associated with Low Disease Activity State of Childhood-onset Systemic Lupus Erythematosus

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Background: Outcomes of childhood-onset systemic lupus erythematosus (c-SLE) were described differently. Presently, the treat to target approach has been proposed with the lupus low disease activity state (LLDAS) as an achievable target.

Objectives: To describe outcome and identify factors associated with reaching LLDAS following 12 months of treatment.

Methods: This was a retrospective study conducted at the Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University. Data from c-SLE patients (≤ 18 years) who were followed ≥ 12 months between January 2009 and December 2019 were gathered. All patients fulfilled either the 1997 ACR or 2012 SLICC classification criteria.

Results: Of 232 c-SLE patients, 199 (85.7%) were female. The median age at diagnosis was 12.1 (IQR 9.5-13.5) years. The mean follow-up time was 6.2 ± 3.7 years. Following 12 months of treatment, 18 (7.7%) patients were in remission. LLDAS was reached in 91 (39%) patients and 123 (53%) patients were classified as non-optimally controlled. Patients without renal involvement had a significantly shorter time to achieve LLDAS with the median time of 10.81 months (95% CI 9.62-12.00) while those with renal involvement yielded 15.64 months (95% CI 13.76-17.52, $p=0.044$). The absence of renal involvement was the significant predictive factor associated with achieving LLDAS following 12 months of treatment (adjusted OR 2.430, 95% CI 1.420-4.158, $p=0.001$). Damage accrual was significantly lower among patients who reached LLDAS following 12 months of treatment than those with non-optimally control state ($p=0.002$).

Conclusion: LLDAS is a promising target of c-SLE. Absence of renal involvement could predict the early attainment.

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