AB002. Evaluation of the reliability and validity of the Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI) in pediatric cutaneous lupus among pediatric dermatologists and rheumatologists

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Background: Cutaneous lupus erythematosus (CLE) refers to skin manifestations of the autoimmune disease lupus erythematosus (LE). While CLE has been extensively researched in the adult population, few studies exist in the pediatric population. The CLASI is a reliable outcome measure for CLE in the adult population, where it is commonly used in clinical trials for SLE. However, no study has validated this assessment tool in children, potentially limiting the conduct of clinical trials in pediatric SLE.

Methods: The study took place at the autoimmune disease clinic of the University of Pennsylvania, on March 3rd, 2018. Physician participants included 5 pediatric rheumatologists and 1 pediatric rheumatology fellow and 4 pediatric dermatologists and 2 dermatology fellows. Eleven pediatric patients with active CLE participated in this study. All physicians were given a 45-minute training session on the assessment of cutaneous lupus using two measurement tools: the CLASI and the Physician Global Assessment (PGA), which allow grading of skin activity and skin damage. Physicians then individually rated each patient using both tools. Following a 45-minute break, all physicians reassessed 2 patients using the same tools. Inter- and intra-rater reliability within each physician group was determined by intraclass correlation coefficient (ICC), type ICC and its confidence interval.

Results: The CLASI activity scores demonstrated excellent inter- and intra-rater reliability (ICC >0.90) among both dermatologists and rheumatologists. The PGA activity score had a good inter-rater reliability (ICC between 0.77–0.73) for both specialties. It had excellent intra-rater reliability for dermatologists (ICC =0.89), and good intra-rater reliability for rheumatologists. The CLASI damage score had good inter-rater reliability among dermatologists (ICC =0.76) and poor inter-rater reliability among rheumatologists (ICC =0.43). It had excellent intra-rater reliability among dermatologists (ICC =0.87) and good intra-rater reliability among rheumatologists (ICC =0.76). The PGA damage scores ranged from good to moderate ICC inter- and intra-rater reliability among both specialties (ICC between 0.76–0.50).

Conclusions: These results demonstrate that the CLASI is a reliable and valid instrument tool to measure skin disease, especially activity, in pediatric CLE patients. The CLASI can be used in future clinical trials as well as in clinical practice for pediatric CLE to help standardize the evaluation of treatment effects on this disease.

Keywords: Cutaneous LE; children; CLASI outcome measurement instrument

doi: 10.21037/atm.2019.AB002

Cite this abstract as: Kushner CJ, Tarazi M, Gaffney RG, Feng R, Ardalan K, Brandling-Bennett HA, Castelo-Soccio L, Chang JC, Chiu YE, Gmuca S, Hunt RD, Kahn PJ, Knight AM, Mehta J, Pearson DR, Treat JR, Wan J, Yeguez AC, Concha JS, Patel B, Okawa J, Arkin LM, Werth VP. Evaluation of the reliability and validity of the Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI) in pediatric cutaneous lupus among pediatric dermatologists and rheumatologists. Ann Transl Med 2019;7(Suppl 4):AB002. doi: 10.21037/atm.2019.AB002

