

The Nottingham Eczema Severity Score: preliminary refinement of the Rajka and Langeland grading

R.M.EMERSON, C.R.CHARMAN AND H.C.WILLIAMS

Dermato-Epidemiology Research Unit, University Hospital, Queen's Medical Centre,

Nottingham NG7 2UH, U.K. Accepted for publication 30 September 1999

Summary A method for assessing disease severity of atopic dermatitis (AD) in children has been developed for population-based research. Based on an index first described by Rajka and Langeland in 1989, disease severity is determined by evaluating the three elements of clinical course, disease intensity and extent of examined AD. This paper describes development of the index for use in epidemiological studies based on a community-based study of 290 pre-school children (aged 1±5 years). Construct validity of the index was evaluated with respect to clinical severity assessment according to a dermatologist, parental severity assessment, use of topical corticosteroids and impairment of quality of life. The severity distribution of AD in this community-based sample of children was: mild 82% (n = 237), moderate 12% (n = 36) and severe 6% (n = 17) according to this new index. In this sample 24% of children had suffered from AD of more than 9 months duration in the preceding 12 months, 4.5% had experienced significant sleep loss (6 or more nights of average sleep loss per week over 12 months) and 11% had experienced widespread extent of involvement (more than 10 body sites involved). Construct validity of the index was demonstrated for clinical and patient-derived severity assessment. This included a comparison between the new index and a global severity assessment by a dermatologist in which exact agreement was achieved in 88% of the cases. A small subgroup of children suffering from persistent localized forms of AD (discoid pattern, hand! foot dermatitis, perioral dermatitis), who reported considerable morbidity, was identified using quality of life measures of severity; they would otherwise have been misclassified by the dermatologist or new index. Preliminary use of the Nottingham Eczema Severity Score would support further development as a research tool for a simple assessment of disease severity that could be used in epidemiological studies. Further validation is required with respect to use in older children, administration by researchers!health professionals and development as a wholly questionnaire-based assessment.

Key words: atopic dermatitis, epidemiology, Nottingham Eczema Severity Score, population study, validation