

EDITORIAL

Persistence of Childhood Eczema Into Adulthood

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In this issue of *JAMA Dermatology*, Margolis et al¹ report on the natural history of mild to moderate atopic dermatitis (AD) in children and adolescents. They examined data from the Pediatric



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Eczema Elective Registry (PEER), which is a prospective, 10-year observational

registry that included 22 550 person-years of observation. The study included 2416 patients with at least 5 years of follow-up, which allowed for longitudinal assessment of AD symptoms over a substantial time period. Diagnosis of AD was made at baseline by a dermatologist, allergist, or pediatrician at enrollment. Longitudinal follow-up using surveys by mail was performed at 6-month intervals. The survey had a 70% response rate, which is considered very good for mail-based surveys. The study did not use random, population-based sampling. Nevertheless, participants resided in virtually all states and districts, with a preponderance in the eastern half of the United States and California.

The authors found that the odds of having no AD symptoms while not using any AD medications increased by 30% with each survey answered. However, the proportion of patients who were symptom-free in the past 6 months was low at all ages (about 6% at age 5 years, about 12% at age 10 years, and about 17% at age 20 years). These findings challenge the conventional dogma that most childhood AD “burns out” and dissipates by late adolescence and adulthood. The authors note the possibility that patients in the PEER cohort may have more severe eczema and therefore more persistent disease. Indeed, a previous cross-sectional study found that more severe eczema was associated with older age.² Many of the children who were prescribed pimecrolimus and subsequently included in the PEER cohort previously failed treatment with topical corticosteroids and perhaps had more severe or refractory disease. Nevertheless, patients who enrolled in the PEER study all had mild to moderate disease at the baseline examination. Thus, it seems that even mild to moderate eczema is more likely to persist into adulthood than we previously realized. Furthermore, it stands to reason that the prevalence of eczema may not differ between adults and kids as much as previously thought.

In fact, a recent study by Silverberg and Hanifin³ found that the US prevalence of eczema in adults is 10.2%, which is remarkably similar to the prevalence of childhood eczema found by other studies.^{4,5} This cross-sectional study is limited by the inability to distinguish between persistence of childhood eczema vs adult-onset disease. The longitudinal study of Margolis et al¹ shed light on this matter, suggesting that childhood eczema persists into early adulthood far more commonly than previously realized. These results have important prognostic implications and provide invaluable data for patient education. It

seems that children with eczema do not really outgrow their eczema. Rather, eczema seems to be lifelong disease with a variable phenotype and/or reduced expression in adulthood.

A clinical scenario that I commonly encounter that illustrates this point is that of moderate to severe hand eczema in postpartum mothers with increased hand washing. Often, patients with severe disease report a history of childhood eczema that “improved” with age. Patients with a history of childhood eczema even without active dermatitis have a lower irritant threshold⁶ and may therefore develop eczema with minimal exposure to wet work. Hand eczema in this scenario would be assigned a diagnosis of irritant contact dermatitis; however, it seems to also be a variable phenotype of AD. There are many such scenarios encountered in adult dermatology practice that may be related to persistence of childhood AD, including, for example, fragrance intolerance, xerosis, and pruritus. Future clinical studies of the variable phenotype of adult AD are needed.

A question that arises is why these recent studies reveal greater persistence of childhood eczema¹ and higher adult eczema prevalence³ than previously thought. It is probable that these differences arise from the use of self-reported eczema outcomes. Many clinical studies use clinical criteria, such as those of Hanifin and Rajka,⁷ that include flexural eczema and other classic stigmata of disease. However, these findings may be absent with a more variable eczema phenotype in adults.⁸ Thus, the use of self-reported outcomes may be more sensitive and actually better suited for some studies of adult eczema. Nevertheless, confirmatory studies using clinical assessments and severity scores, such as Scoring Atopic Dermatitis (SCORAD) and the Eczema Area and Severity Index (EASI), are warranted.

Another question that arises is why eczema activity tends to persist with age in so many children. The present study identified a number of potentially harmful factors that decreased the odds of being symptom-free in the past 6 months, including family history and environmental factors such as pollen, emotion, fumes, dust, pets, wool, cigarettes, food or drink, and soaps or detergents. One of the challenges of identifying environmental risk factors by questionnaire is potential recall bias. That is, patients with persistent eczema may be more likely to recall various exposures or events than those with mild or no eczema. Nonetheless, these findings are “hypothesis generating,” and I am hopeful that Margolis et al¹ and others will continue to explore the environmental risk factors for eczema persistence.

In summary, the study of Margolis et al¹ provides much needed data on the natural history of eczema. More longitudinal studies are needed to further understand the factors that are responsible for disease severity and persistence.

ARTICLE INFORMATION

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