The Evolution of Atopic Dermatitis

Two major Korean epidemiological studies on atopic dermatitis (AD) are published in this issue of Acta Dermato-Venereologica. The Seoul study among 6,453 pre-school children aged 0–6 years (Choi, et al. pp. 467–471) and the Jeju Island study (Kim, et al. pp. 472–474) on the point prevalence of AD among 4,028 6–12-year-old Korean school children.

It is an impressive amount of work performed by our South Korean colleagues as these studies include both questionnaire results and physical examination (point prevalence).

The essential data from the studies are:
The Seoul study: A questionnaire prevalence of AD of 19.1% versus a dermatological examination incidence (point prevalence) of 9.2% with 96.2% having mild dermatitis; 56.7% reported their symptoms had not completely cleared in the last 12 months.
The Jeju Island study: 9.5% of the children had AD on examination. Half had mild disease according to the three items severity (TIS) scoring system.

The Seoul study among 0 to 6 years old had an equal distribution among boys and girls. But, the Jeju study highlights something important, which is often not discussed: girls (in this age group) had significantly more AD than do boys ($p<0.005$).

I have access to non-published data for approximately 1,000 Danish infants aged 0–2 years, two-thirds of whom were boys. Thus, boys develop eczema earlier in life than do girls.

The second clear observation is that AD ”disappears with age” as clearly seen in the Jeju Island study. AD is therefore an early-life event. This causes me to speculate whether ”intrinsic vs. extrinsic” classification helps us? If ”extrinsic AD” exists it should not disappear with age, since the same environmental pressures still act on the child (Bieber T. Atopic dermatitis. N Engl Med 2008; 358: 1483–1494).

Both studies highlight the fact that Korean schoolchildren now have the same risk of having eczema as in any industrialized country. However, this is not the case in rural African studies, where the point prevalence in the same age group is approximately 2–3%.

Dr Bernie Ackermann, the American dermatopathologist, coined the following sentence applicable to dermatological diseases: ”The lives of lesions”. Nothing is static. AD is a biological evolutionary disease expressed early in life, for which we still need to understand the pathophysiology.

And – why are 2/3 of infants developing eczema boys whereas later in life girls more often have eczema? Do we have a Y1 effect and if so – why?

The studies remind us that AD is a fluctuating, but chronic disease, which in most children will go away. We doctors must help parents to understand this – and not just prescribe ”another tube of cream”. It is a skin inflammation needing control. We should develop simple and understandable guidelines for parents. Let us ask the newly formed International Society of Atopic Dermatitis for help in doing so.

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1Referring to Y chromosome.