

Was the prevalence of Japanese childhood atopic eczema symptoms overestimated in the ISAAC study?

To the Editor:

The International Study of Asthma and Allergies in Childhood (ISAAC) Phase One study has demonstrated that the prevalence of childhood allergic disorders is very high in Japan.^{1,2} In particular, the 12-month prevalence value of symptoms of atopic eczema in Japanese children 6 to 7 years of age was 16.9%, the second highest after Sweden. In the ISAAC study, atopic eczema was considered to be present if the parents answered “yes” to the following original questions: (1) Have you (Has your child) ever had an itchy rash that was coming and going for at least 6 months? If yes: (2) Have you (Has your child) had this itchy rash at any time in the last 12 months? If yes: (3) Has this itchy rash at any time affected any of the following places: the folds of the elbows, behind the knees, in front of the ankles, under the buttocks, or around the neck, ears, or eyes?

However, during a research conference of our prospective cohort study of maternal and child health, we identified a crucial translation error in the Japanese version of these ISAAC core questions on the symptoms of atopic eczema. A British professor (Fukuoka University Graduate School of Humanities, Fukuoka, Japan) back-translated the first question in the Japanese version literally as “During the last 6 months have you (has your child) suffered from an itchy rash that was coming and going?” The Japanese translation does not take into consideration the persistence of symptoms, for example, “for at least 6 months.” As a result, those with a positive response to the second question about the “presence of an itchy rash in the last 12 months” even though they affected the skin creases for less than 6 months must have been regarded as having atopic eczema. This may have led to an overestimation of the 12-month prevalence values of atopic eczema in Japanese children.

The epidemiologic criteria for the diagnosis of atopic eczema are very significant because physicians’ diagnosis of atopic eczema is not necessarily consistent, especially

in Japan. A principal investigator for ISAAC in the Japanese center was an eminent physician specializing in allergies, to whom we express deep respect for his contributions to the study of systematic international comparisons of the prevalence of allergic disorders. However, this case may reflect the lack of recognition of the importance and implication of the epidemiologic disease definition and the study using such a definition among many Japanese medical professions. Although the prevalence of atopic eczema in Japanese children may to some extent be overestimated in the ISAAC study, it is certain that the prevalence in Japan is very high, as well as in Northern Europe. To elucidate preventive and risk factors for atopic eczema, valuable epidemiologic studies with well-appreciated diagnostic criteria should be conducted in Japan.

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