It is time to consider global variations in the clinical phenotype: a commentary on the new diagnostic criteria for atopic dermatitis in children in China

Although atopic dermatitis (AD) is the most common chronic inflammatory skin disorder worldwide, the scientific community has to admit practical issues related to its diagnosis in different age ranges as well as with regards to the differences in the clinical phenotype related to distinct ethnic backgrounds.1 Clearly, validated diagnostic criteria are missing for both edges of life, i.e. the young infants and the elderly. Most of the diagnostic criteria have been established and validated starting from a paediatric Caucasian population but their adaptation to variations in the phenotypes according to the age and worldwide has not been in the focus of our interest for many decades. This is reflected by intriguing results in global epidemiologic studies such as ISAAC which have suggested that the prevalence of paediatric AD (6–7 years of age) is particularly low (2.8–3.9) in countries with clear Chinese ethnic background such as Taiwan, Hong-Kong and Singapore.2 This problematic issue is further accentuated by the fact that in the traditional Chinese approach, the phenotypic spectrum of what is called AD in western countries is typically split into two distinct entities: on one hand ‘eczema’ which mostly covers the mild and moderate forms of AD and on the other hand ‘atopic dermatitis’ which covers the more moderate to severe forms of the phenotype. Besides the consequences in our epidemiological understanding of the disease, the putative impact of this dichotomic view in China and potentially in other countries such as Africa on the pathophysiological understanding, the global drug development programs and regulatory issues are obvious.

In the recent years, in an effort to address this critical issue, a group of Chinese dermatologists lead by Prof. Yao from Jiao Tong University in Shanghai have published a series of studies dealing with the appropriateness of the classical diagnostic criteria such as those of Hanifin and Rajka3 and the UK working party4 for the diagnosis of AD in the Chinese paediatric population.5–7 In a first approach and previous publications, this group clearly showed that the stringent application of the Hanifin and Rajka criteria in Chinese children leads to a significant underestimation of the diagnosis of AD in this population when compared to the results obtained by clinically experienced dermatologists.5–7 These results clearly showed the urgent need for refined diagnostic criteria better adapted to assess the disease in this particular ethnic background and to overcome the traditional dichotomic approach of the phenotype.

The next step as exposed in the commented paper8 published in this issue of the JEADV was the attempt to define and validate new diagnostic criteria which should better reflect the situation in this country. The golden standard for this endeavour was the long-lasting clinical expertise of highly experienced dermatologists which was tested against the classical diagnostic criteria of Hanifin and Rajka as well as the UK diagnostic criteria in a large number of children with AD and controls. Surprisingly, the resulting criteria were rather simple including only the three following features: (i) pruritus, (ii) typical morphology and distribution or atypical morphology and distribution combined with xerosis, (iii) a chronic or chronically relapsing course. Using these criteria, the authors reached an overall remarkable sensitivity and specificity compared to the so far established criteria. Another unexpected aspect is the lack of any anamnestic item such as a familial history of atopic diseases. The reason could be that this has been considered by the authors as ambiguous in the Chinese population based on their experience with this major item in the stringent use of the Hanifin and Rajka criteria, e.g. when eczema is mentioned instead of AD in the family history and therefore is not considered as relevant information.

These new diagnostic criteria for AD in children can be considered as an important milestone in the evolving field of the Chinese perspective of this disease and the discussions along the dichotomic approach of the phenotype, i.e. eczema versus AD. This pioneer work could also be the starting point for similar projects in other countries where it is felt that the classical criteria of Hanifin and Rajka or of the UK working party may need some adaptation to better reflect the particularities and phenotypic variations of the disease in a different ethnic background.

Conflicts of interest
None of relevance for this contribution to declare.

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