

Stigmata of Atopy in Children in Dermatology-Venereology Department of National University Hospital Center Hubert Koutoukou Maga of Cotonou

Adegbidi H1*, Akpadjan F1, Atadokpede F1, Degboe B1, Agbessi N2, Koudoukpo C2, Bagnan L4, Kouotou EA3 and Padonou DAF1

Department of Dermatology-Venereology, Faculty of Health Sciences, University of Abomey-Calavi, Republic of Benin

Email: adegbidih@yahoo.fr, barfice@yahoo.fr

ABSTRACT

Atopy is a hereditary predisposition to symptomatic reaction to various allergens such as house dust, mites, pollens, animal hair, food, etc. These manifestations include asthma, allergic rhinitis, allergic conjunctivitis, food allergy and atopic eczema. They are accompanied by so-called minor signs, which are the particular expressions or stigmata of atopy. These stigmata of atopy, which by their presence defines the atopic terrain, allow the dermatologist to recognize a hereditary predisposition to allergic reactions. There have been few studies in Africa.

We have therefore proposed to study the epidemiological and clinical aspects of particular expressions of atopy in the Department of Dermatology and Venereology at the National University Hospital Center (NUHC) in Cotonou in order to identify the stigmata that are present high diagnostic value of atopic terrain.

The sex ratio male/female was 0.92; Allergic asthma and rhinitis were the most frequent antecedents among atopic children with rates of 17.80% and 9%, respectively. Fifty-two percent (52%) of the parents had at least one allergic history. The most frequent antecedents of atopic children were allergic asthma (62%) and allergic rhino-sinusitis (50.40%). The allergic conjunctivitis (4.10%) and atopic dermatitis (1.60%) are the least frequent antecedents in parents. Stigmata of atopy or minor signs of atopy were found in 215 children (43.87%).

As our study is retrospective, it presents certain biases, not the systematic search for all stigmata. Nevertheless, it allowed us to identify the stigmata

of atopy and to prioritize it in the Beninese child aged 0 to 14 years. The prevalence of atopic terrain was 32.80% among the children of the study. This rate is close to that founded by Kharfi , in Tunisia (35.90%) but is below that of Onunu, in Nigeria (46%) among children and beyond that of Castelain and Geraut , which are respectively 20% and 18.70%. Grosshans, on the other hand reported a rate varying between 33.70% and 56.40%. These differences may be related to the recruitment of different studies.

Two-thirds of our study population had age ranged from 1 month to 7 years with an overall mean age of 5.54 years. Only 44% of children had one or more stigma of atopy. Cutaneous xerosis is the most prevalent stigma. In the Koepfel study, it was present in 50-98% of cases. It seems therefore more prevalent in the white population than in the black population. This is explained by the high degree of hygrometry in Benin. Sign of Dennie-Morgan was observed in 14.50% in our study. Its presence is reported by Raynaud, and Koepfel, without specifying its prevalence.

Ecematids with a rate of 10.60% represented the third stigma in descending order of prevalence. Keratosis pilaris was found at a rate of 6.30%; which is comparable to that of Raynaud , (2 to 6%). Ichthyosis was found in 1.80% of patients; this rate is similar to that of Koepfel, and Raynaud , which both report a rate of between 2 and 6%. Palmar hyperlinearity was present in 0.2% of the children in our study, while Koepfel, found it in 30-90% and Prigent, in 68.20% of the cases. This discrepancy in our results is due to the fact that this stigma is not usually sought during the consultation in our context.

Eczematide, periorbital hyperpigmentation, cheilitis and white dermographism, were stigmata rarely reported in the literature. The relatively low rates in our study of periorbital hyperpigmentation, cheilitis and white dermographism are probably due to the fact that their search by the dermatologist is not systematic. The same applies to the low hair implantation, the cholinergic whiteness and the facial pallor which are stigmata reported by Koeppel. Our study concerns cases of black children with a skin tone that does not describe cholinergic whiteness or facial pallor.

The Dennie-Morgan sign was associated with other stigmata in 75% of cases and was the most commonly associated stigma among the 60 atopic children with more than one. Cutaneous xerosis was associated with other stigmas in 22% and is the second most commonly associated stigma in the 60 atopic children after the Dennie-Morgan sign. The association of the Dennie-Morgan sign and the cutaneous xerosis is the most frequent association with a rate of 28.30%. Two patients (3.33%) had a combination of 4 stigmata: Dennie-Morgan sign, Cutaneous Xerosis, Eczematids and Keratosis pilaris. The rare associations of stigmata were keratoderma-keratosis pilaris, eczematide-keratosis pilaris, sign of Dennie Morgan-periorbital hyperpigmentation and cutaneous xerosis-keratosis pilaris. These rare associations could not be considered as having a high diagnostic value of atopy in the absence of a personal or family history in a child. However, the presence of the sign of Dennie Morgan and/or cutaneous xerosis, in the absence of a personal or family history of atopy in child, could henceforth be considered as objective and highly diagnostic signs of the atopic terrain. Yédomon et al. have made the same observation in their 2011 publication.

Our study, despite its inadequacies, has identified the stigmata of atopy in children aged 0 to 14 years in the Department of Dermatology-Venerology of the NUHC-HKM Cotonou and to specify their prevalence. Indeed, it was especially important to note that the presence of Dennie Morgan's sign and/or cutaneous xerosis has a high diagnostic value of atopic terrain in the absence of a personal or family history of atopy in children in Cotonou.