

Editorial

Allergy – atopy – hypersensitivity – a matter of definition

There is general agreement that the frequencies of allergic and hypersensitivity reactions are increasing, especially in the industrialized parts of the world (1). The reasons for this increase in the morbidity of allergic diseases are still largely unknown, although heredity and various environmental factors are assumed to be of importance (1, 2). However, methodological issues must be considered, as the increasing public awareness of the rising trends in the prevalence of allergic diseases may interfere with the results in epidemiologic studies. Besides, the classification and diagnostic definitions of reactions to various external substances may differ between physicians.

Allergic diseases were described already during the Greek and Roman civilizations, and the term “hay fever” was introduced in the literature in English during the 19th century (3, 4). However, the term “allergy” is not found in the medical scientific literature until 1906, when it was introduced by von Pirquet (5). He derived the term “allergy” from the Greek words *allos* (“changed”) and *ergos* (“reaction”). In Sweden and the rest of northern Europe during recent decades, the term “allergy” has been used to denote hypersensitivity reactions to external substances but only if the immune system is involved in the reaction (Fig. 1).

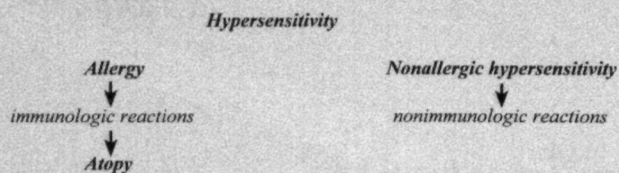
In 1916, Cooke & van der Veer described the immediate whealing reactions to common allergens in patients suffering from common allergic diseases (6). The term “atopy” was introduced by Coca & Cooke in 1923 to describe these findings (7). They showed that the reactions could be ascribed to the presence of heat-labile “bodies”, which they called “reagins”. We now know that these reagins belong to the IgE-antibody class (8–10). In 1973, Pepys defined “atopy” as “that form of immunological reactivity of the subject in which reaginic antibody is readily produced in response to ordinary exposure to common allergens of the subject’s environment” (11). Thus, Pepys’ definition does not imply the presence of symptoms, but describes the immunologic reactivity of the subject. This definition also includes a general agreement of a genetic predisposition to produce IgE (2, 12). The atopic reactivity can be verified by serologic tests (i.e., RAST) and/or

by skin prick tests to detect antigen-specific IgE antibodies (13). In accordance with Pepys’ definition, Aas already in 1981 proposed that one should distinguish between bronchial asthma with and without allergy or atopy (14).

For hypersensitivity reactions to external substances but without involvement of an obvious immunologic mechanism, the term “nonallergic hypersensitivity” is suggested (Fig. 1). In Scandinavia, the term “hypersensitivity” has been used as a general term to describe an adverse clinical reaction (immunologic and nonimmunologic) to an antigen/allergen (Fig. 1). In turn, “hypersensitivity” should be distinguished from the term “hyperreactivity/hyperresponsiveness”, which is organ-related increased sensitivity to unspecific trigger factors. In the lower respiratory tract, bronchial hyperreactivity is an established manifestation of bronchial asthma (15). There exists a similar hyperresponsiveness in the upper respiratory tract (16) and most probably also in the skin and in the gut.

In this issue of *Allergy*, Ehlers et al. publish their paper, “Role of nonallergic hypersensitivity reactions in children with chronic urticaria” (17). In this paper, the authors denominate these reactions also as “pseudoallergen-induced” chronic urticaria. In their introduction, they note the absence of a strict definition of such reactions. They are not the only authors to use the term “pseudoallergy”, since it is also mentioned in the latest textbook on allergy published in Europe (18). Besides, in a recent publication, Röcken et al. asked, “What exactly is ‘atopy’?” (19). They conclude that the terms “atopy” and “allergy” cannot be considered synonyms. However, in contrast to Pepys, they suggest that the phenotypic characterization of atopy requires both clinical symptoms of atopic disease (bronchial asthma, allergic rhinitis, atopic dermatitis) and at least two positive *in vivo* *in vitro* parameters characteristic of atopy (increased serum levels of total IgE; positive RAST to more than one environmental protein allergen; positive skin prick test to more than one environmental protein allergen) (19).

Thus, the papers by Ehlers et al. (17) and Röcken et al. (19) focus on the need for unitary diagnostic



IgE-mediated allergy

Fig. 1. Classification of reactions to various external substances.

criteria and definitions in the field of allergy. Establishing the nomenclature in allergy is a task of the greatest priority for the EAACI and the IAACI during the coming years. We also invite the readers of *Allergy* to discuss and comment on this important topic.

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