

EDITORIAL

OCCUPATIONAL ALLERGIC DISEASES

The working environment is probably one of the greatest risk factors for allergic disease due to the wide variety of substances that can sensitize individuals, whether pre-disposed or not, through inhalation or contact. The incidence of occupational allergic disease is on the increase, with certain features that distinguish it from allergic disease among the general population, in which the increase is largely due to better hygiene and protection from vaccination, as argued by the much-debated hygiene hypothesis¹.

Industrial development brings with it new substances with which, one way or another, personnel working in the industry come into contact, despite taking the relevant precautions to avoid direct contact, whether through individual protection (masks or special clothing) or through the design of apparatus. Nevertheless, a vast number of products are practically impossible to avoid, such as flour in bakeries, or gases in many workplaces². Because of this variety and the increase in industrial chemical products, clinicians daily face the challenge of identifying substances that often go unnoticed in the working environment and of determining their relationship with a possible allergic disease in workers; in addition, they must also demonstrate a cause-effect relationship, implying legal action if the disease is considered occupational³.

Occupational allergic diseases are highly varied. The most frequent may be respiratory disease, with asthma or rhino-conjunctivitis; the now classic disease of extrinsic allergic alveolitis could also be included in this category, with farmer's lung disease being a prime example^{4,5}. Cutaneous disease plays a notable role in the field of occupational allergy, with manifestations ranging from contact dermatitis to urticaria. Finally, there are anaphylactic reactions, such as those caused by bee stings in beekeepers⁶ or by the use of latex gloves⁷; this latter element has become one of the most prominent causes of severe allergic reactions.

Despite the wide variety of substances in the working environment that can sensitize people and provoke allergic reactions, for an allergic reaction to take place, certain individual determining conditions must be present, since these elements differ from toxic substances, which would affect all workers according to their degree of exposure. Sometimes occupational allergic reactions occur in individuals who have already experienced an allergic disease, and which may be controlled, but who, on coming into contact with a new substance, can become sensitized, aggravating their underlying – usually respiratory – disease. Other times, the reaction occurs in individuals with no history of allergic disease who, due to continual contact, become sensitized, perhaps due to a slight atopic predisposition. Symptoms usually affect the eyes and nose, although persistent contact

may increase bronchial reactivity⁸. Likewise, bronchial involvement may be limited to the mucosa, without bronchospasm, and the reaction may be labeled as eosinophilic bronchitis⁹.

In addition to genetic predisposition, other factors influence the process, ranging from the characteristics and molecular weight of the sensitizing agents, the degree of exposure, and the coparticipation of irritants contributing to inflammation and the increase in bronchial reactivity¹⁰⁻¹².

The main effect of this disease is personal as it impairs the quality of life of affected workers¹³; even though contact with the causative agents ceases, the symptoms may persist for several years. Moreover, taking into account time off work, treatment, and the growing number of affected individuals, the social and economic costs of occupational allergic disease are very high^{14,15}. With all these difficulties, efforts must be made to reduce the incidence of this disease. In addition to the measures that should be taken in all workplaces where the substances used supposedly cause allergic diseases, before beginning work, teenagers and young adults should be advised to avoid working in environments that, sooner or later, could be harmful and could make a return to previous employment impossible (fourth prevention)¹⁶.

In the present edition of *Allergologia et Immunopathologia*, three studies focus on aspects of this disease: anaphylactic reactions due to bee stings (Celikel et al⁶), occupational contact with latex gloves (Peixinho et al⁷) and, lastly, occupational asthma in industry is discussed in an extensive update by Fernández-Nieto et al³.

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