

Occupational Rhinitis in Agriculture

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ABSTRACT

Occupational rhinitis in agriculture is an occupational disease that is becoming increasingly important and their relationship and association with occupational asthma. The data on the epidemiology, diagnosis, treatment and socio-economic impact of occupational rhinitis and prevention strategies are presented. The most important aspect of this definition is the causal relationship between occupational exposure and disease development. The Agriculture is one of the productive sectors most at risk of exposure.

Keywords: Occupational rhinitis, Agriculture, Nose, Prevention

INTRODUCTION

“Occupational” rhinitis has been defined by the European Academy of Allergology and Clinical Immunology (EAACI) as an “inflammatory pathology of the nose, characterized by intermittent or persistent symptoms (nasal congestion, sneezing, rhinorrhea and nasal pruritus) and/or variable limitation of nasal patency and/or hypersecretion, due to causes and conditions attributable to a particular work context and not to stimuli extra-work moles” [1,2]. The EAACI, in analogy with occupational asthma, has classified the “occupational” rhinitis among the work-related rhinitis, which also include the rhinitis exacerbated by the work, which consists of a pre-existing or concomitant rhinitis triggered or exacerbated by the working activity [3]. Agriculture is one of the production sectors at greatest risk for exposure [4]. An epidemiological study conducted in Finland showed that 20% of all reported cases of rhinitis were occupational in nature and that the most common causative agents came from occupational exposures in the agricultural work environment [5].

CLASSIFICATION

Depending on its pathogenesis, professional rhinitis can be classified as allergic and non-allergic; another subdivision is in reactive, irritative or immunological forms. Most cases of allergic rhinitis in the workplace derive from exposure to high molecular weight allergens such as animal, vegetable, food and enzymatic proteins.

The professional noxas that can cause allergic rhinitis in farmers are wheat powders, molds, fungal spores, proteins derived from epithelia and urine from farm animals [6].

The form of irritative rhinitis can be caused by nitrogen dioxide, bacterial endotoxins, pesticides (organophosphorus and organochlorines), fertilizers (ammonium sulfate and nitrate and potassium chlorate) and disinfectants (aldehydes). Allergic rhinitis in agriculture is underestimated especially when compared to allergic asthma and industrial rhinitis.

PROBLEMS

The presence of numerous “confounding” factors, the lesser current interest in literature, often “spurious” epidemiological data, the difficulty of establishing causation, the normative coding, the diversity of classification criteria, the unvalidated diagnostic methods, sometimes entrusted more to a clinical diagnosis than an instrumental one, they are just some of the elements, which tend to contaminate the clinical and medico-legal evaluation.

“Occupational” allergic rhinitis in agriculture, in addition to determining sensitive direct and indirect social-health costs, significantly altering the quality of life of patients, determines a significant impact on work performance, also

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associated with repercussions on work absenteeism [7]. The first approach to managing work-related rhinitis involves risk assessment, exposure estimates and prevention measures with interventions aimed at reducing or eliminating exposure to the causative agent. Occupational rhinitis therapy has a twofold objective: to alleviate the nasal symptoms and their impact on the well-being of the worker and possibly prevent the development of occupational asthma [8].

THERAPY AND PREVENTION MEASURES

Therapeutic options include both environmental interventions aimed at avoiding exposure to the causative agent and pharmacological treatment. The first objective, often burdened by socio-economic implications, can be achieved through the transfer of the interested party, where possible, to another production line or through the adoption of protective measures (for example masks, filters or barriers).

Nasal symptoms, however, may not completely resolve even after complete elimination of exposure, which is why clinical surveillance is always appropriate [9].

The effect of non-sedating antihistamines and topical corticosteroids has not yet been the subject of in-depth studies, but it is clear that they, along with decongestants, constitute an important resource and an appropriate alternative to the elimination or reduction of exposure to work with the sensitizing agent.

Specific immunotherapy is currently limited by the unavailability of standardized extracts for most occupational allergens and should be used with caution.

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CONCLUSION

Modern agriculture has changed, far from the bucolic visions of the past. Diseases that are directly or indirectly linked to field work must also be viewed in a different light. The allergic rhinitis is surely for frequency and for incidence on costs and absences a still underestimated and in some ways little known reality. We need a joint effort between the various actors of this process so that they can find unequivocal and concrete answers to the problems of these workers and these rural environments.

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