

Editorial

Comments on the Classification of Allergic Rhinitis According to the ARIA Guidelines 2008

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Introduction

Rhinitis is a very frequent condition and it has been estimated that up to 40% of the population suffers from the nasal symptoms of rhinitis at some time during their life. Allergic rhinitis (AR) is the most frequent type (70%-80%), although this can vary depending on the geographical area. Worldwide, the prevalence of rhinitis varies from one country to another (5% to 40%). The prevalence in Spain is 21.5%. One out of 5 children and adults has been considered to suffer from this condition [1-3].

In recent years, AR has become increasingly relevant due to its effect on quality of life, productivity at school and work, the socioeconomic burden it generates, and its coexistence with other clinical manifestations such as asthma, conjunctivitis, otitis, rhinosinusitis, and nasal polyps [1-3].

Classification of AR

AR has been traditionally classified as perennial or seasonal, depending on the kind of allergen responsible for the symptoms [4,5]. However, this classification is no longer satisfactory for a health care setting, because patients are becoming increasingly sensitized to different allergens, and pollens and molds can trigger seasonal symptoms in some patients [6,7].

The ARIA document (Allergic Rhinitis and its Impact on Asthma) [3], published in 2001, classified AR according to its duration as "intermittent" or "persistent." It also introduced a classification of severity depending on its impact on quality of life (disturbing symptoms, impairments in daily life, impairments in work and school performance, sleep disorders), defining rhinitis as mild when patients do not suffer from any of these 4 items, and moderate-severe when patients suffer from at least 1 of them.

The classifications of duration and severity were based on empirical criteria that required validation. In recent years, the classification of duration has been validated in different national and international studies [8-12].

The classification of severity has traditionally been used to stratify patients from a clinical, epidemiological, and diagnostic perspective, and thus facilitate better therapeutic

management. An example can be seen in the Global Initiative for Asthma (GINA) [13], where the authors classify severity as mild, moderate, or severe based on clinical and pulmonary function criteria. This classification is used to define and follow up therapeutic strategies in daily clinical practice, in clinical trials, and in epidemiological studies.

April 2008 saw the publication of the ARIA guidelines update [14], which maintained the outlines of the 2001 classification. With regard to classification of AR, 3 new studies suggest differentiating between mild, moderate, and severe AR [15-17], although these suggestions, as commented on in the ARIA guidelines, make the classification more complex, do not modify current therapeutic options, and do not provide improvements for the patient.

Some studies have analyzed the prevalence of mild and moderate-severe rhinitis in different population samples, and found that 69% of patients with rhinitis who attend an otorhinolaryngology or allergy clinic and 90% of the patients who attend a primary care center are classified as moderate-severe [6,10-12]. This high percentage of patients classified as moderate-severe could indicate wide variability in terms of disease severity. It would be useful to differentiate this group of patients in order to have a more homogeneous sample for epidemiological and clinical studies, and to develop a therapeutic strategy [3,6,19,20]. Because of the need to differentiate between the different degrees of severity, new criteria have been established that allow rhinitis to be classified as mild, moderate, or severe [6,15-18]. This differentiation would enable us to define new strategies for therapy and follow-up, both in clinical practice and in clinical trials.

Bousquet et al [6] consider that the term moderate-severe should be replaced by severe, thus classifying severity as mild or severe.

Bousquet et al [17] suggest the use of a visual analog scale to classify the severity of AR, considering it mild when it is less than 5 and severe when it is greater than 6 although, surprisingly, there is no classification when the score is between 5 and 6.

Using the percentage disproportion observed in the classification of AR severity due to the high frequency of patients classified as moderate-severe (89.3%), Van Hoescke et al [15] propose a new empirical model to classify moderate-

severe rhinitis, by eliminating the “disturbing symptoms” item and combining in only 1 item the impairments in daily life, work, and school. In this model, severity would be classified into 3 groups: mild, when the patient does not suffer from any item; moderate, when the patient suffers from the new combined item or from the “sleep disorders” item; and severe, when the patient suffers from both items. The application of these criteria in a population sample of 804 subjects with AR results in 20.5% of patients with mild AR, 45.9% with moderate AR, and 33.6% with severe AR. Significant differences between the 3 groups were found in most symptom scores, in the diagnostic methods (skin tests), referral criteria, and in the drugs used for treatment (mainly corticosteroids and antihistamines).

Valero et al [18] have published new criteria to classify AR. They show the following: (1) There is wide heterogeneity in the score for symptoms and impairment in the quality of life in subjects with AR classified as moderate-severe; (2) All the items used to differentiate between mild and moderate-severe AR carry equal weight, thus making it impossible to establish the difference between moderate and severe based on the number of items suffered; and (3) Statistically significant differences and a greater magnitude of the effect on the intensity of symptoms and on the impairment in quality of life are observed when AR patients are classified as moderate if they suffer from 1, 2, or 3 items, and as severe if they suffer from all 4 items.

These 2 studies are very similar with regard to the basis of their classification. In the classification proposed by Valero et al [18] it would not be necessary to modify the items as they now stand in the ARIA document. We believe that this is very important, given the document’s wide readership. Despite the high prevalence of “disturbing symptoms” (95%), the least discriminating of the 4 items, ARIA considers that it should not be eliminated because it enables mild rhinitis to be differentiated easily.

The latest ARIA classification of AR is innovative in its approach to duration of symptoms and quality of life in the assessment of severity. Nevertheless, some questions have yet to be resolved:

a) Is it really necessary to differentiate patients classified as moderate-severe?

b) Given that the classification must be performed in patients who are not under treatment, how should we classify rhinitis in patients who are under treatment?

c) Can the classification of AR as seasonal or perennial be totally substituted by the new classification of intermittent or persistent, or could these be complementary classifications, as discussed in a recent publication by the British Society of Allergy and Clinical Immunology [21]?

d) The group classified as persistent is heterogeneous and could be subclassified according to the duration of the symptoms. Therefore, as far as severity is concerned, is it the same to suffer symptoms for 6, 24, or 36 weeks?

e) For purposes of follow-up, especially with patients already under treatment, would it be more appropriate to introduce the concept “control” of the disease instead of the classification of duration and severity?

Epidemiological and clinical studies are necessary to

answer these questions in order to precisely define the most suitable way to classify and treat patients with AR.

References

- Bauchau V, Durham SR. Prevalence and rate of diagnosis of allergic rhinitis in Europe. *Eur Respir J*. 2004;24:758-64.
- Bousquet J, Demarteau N, Mullol J, van den Akker-van Marle ME, Van Ganse E, Bachert C. Costs associated with persistent allergic rhinitis are reduced by levocetirizine. *Allergy*. 2005;60:788-94.
- Bousquet J, van Cauwenberge P, Khaltaev N. ARIA Workshop Group, World Health Organization. Allergic rhinitis and its impact on asthma. *J Allergy Clin Immunol*. 2001;108:S147-334.
- Dykewicz MS, Fineman S. Executive summary of Joint Task Force Practice Parameters on Diagnosis and Management of Rhinitis. *Ann Allergy Asthma Immunol*. 1998;81:463-8.
- Van Cauwenberge P, Bachert C, Passalacqua G, Bousquet J, Canonica GW, Durham SR, Fokkens WJ, Howarth PH, Lund V, Malling H-J, Mygind N, Passali D, Scadding GK, Wang D-Y. Consensus statement on the treatment of allergic rhinitis. *Allergy*. 2000;55:116-34.
- Bousquet J, Neukirch F, Bousquet PJ, Gehano P, Klossek JM, Le Gal M, Allaf B. Severity and impairment of allergic rhinitis in patients consulting in primary care. *J Allergy Clin Immunol*. 2006;117:158-62.
- Ciprandi G, Cirillo I, Vizzaccaro A, Tosca M, Passalacqua G, Pallesstrini E, Canonica GW. Seasonal and perennial allergic rhinitis: is this classification adherent to real life? *Allergy*. 2005;60:882-7.
- Demoly P, Allaert FA, Lecasble M, Bousquet J. Validation of the classification of ARIA (allergic rhinitis and its impact on asthma). *Allergy*. 2003;58:672-5.
- Bauchau V, Durham SR. Epidemiological characterization of the intermittent and persistent types of allergic rhinitis. *Allergy*. 2005;60:350-3.
- Bousquet J, Annesi-maesano I, Carat F, Rugina M, Pribil C, El Hasnaoui A, Chanal I. Characteristics of intermittent and persistent allergic rhinitis: DREAMS study group. *Clin Exp Allergy*. 2005;35:728-32.
- Bachert C, van Cauwenberge P, Olbrecht J, van Schoor J. Prevalence, classification and perception of allergic and nonallergic rhinitis in Belgium. *Allergy*. 2006;61:693-8.
- Pereira C, Valero A, Loureiro C, Davila I, Martinez-Cocera, Murio C, Rico P, Palomino R. Iberian study of aeroallergens sensitization in allergic rhinitis. *Allerg Immunol (Paris)*. 2006;38:186-94.
- Workshop Report, Global Strategy for Asthma Management and Prevention (GINA). Initiative World Health Organization, WHO. Updated November 2007. <http://www.ginasthma.com/>
- Bousquet J, Khaltaev N, Cruz AA, Denburg J, Fokkens WJ, Togias A, Zuberbier T, Baena-Cagnani CE, Canonica GW, van Weel C, Agache I, Ait-Khaled N, Bachert C, Blaiss MS, Bonini S, Boulet LP, Bousquet PJ, Camargos P, Carlsen KH, Chen Y, Custovic A, Dahl R, Demoly P, Douagui H, Durham SR, van Wijk RG, Kalayci O, Kaliner MA, Kim YY, Kowalski ML, Kuna P, Le LT, Lemiere C, Li J, Lockey RF, Mavale-Manuel S, Meltzer EO, Mohammad Y, Mullol J, Naclerio R, O’Hehir RE, Ohta K, Ouedraogo S, Palkonen S, Papadopoulos N, Passalacqua G, Pawankar R, Popov TA, Rabe KF, Rosado-Pinto J, Scadding GK, Simons FE,

- Toskala E, Valovirta E, van Cauwenberge P, Wang DY, Wickman M, Yawn BP, Yorgancioglu A, Yusuf OM, Zar H, Annesi-Maesano I, Bateman ED, Ben Kheder A, Boakye DA, Bouchard J, Burney P, Busse WW, Chan-Yeung M, Chavannes NH, Chuchalin A, Dolen WK, Emuzyte R, Grouse L, Humbert M, Jackson C, Johnston SL, Keith PK, Kemp JP, Klossek JM, Larenas-Linnemann D, Lipworth B, Malo JL, Marshall GD, Naspitz C, Nekam K, Niggemann B, Nizankowska-Mogilnicka E, Okamoto Y, Orru MP, Potter P, Price D, Stoloff SW, Vandenplas O, Viegi G, Williams D. ARIA Update. *Allergy*. 2008;63(Suppl 86):8-160.
15. Van Hoecke H, Vastesaeger N, Dewulf L, Sys L, van Cauwenberge P. Classification and management of allergic rhinitis patients in general practice during pollen season. *Allergy*. 2006;61:705-11.
 16. Van Hoecke H, Vastesaeger N, Dewulf L, De Bacquer D, van Cauwenberge P. Is the allergic rhinitis and its impact on asthma classification useful in daily primary care practice? *J Allergy Clin Immunol*. 2006;118:758-9.
 17. Bousquet PJ, Combescure C, Neukirch F, Klossek JM, Méchin H, Daures JP, Bousquet J. Visual analog scales can assess the severity of rhinitis graded according to ARIA guidelines. *Allergy*. 2007;62:367-72.
 18. Valero A, Ferrer M, Sastre J, Navarro AM, Monclus L, Marti-Guadaño E, Herdman M, Dávila I, del Cuvillo A, Colas C, Baro E, Antepará I, Alonso J, Mullol J. A new criterion by which to discriminate between patients with moderate allergic rhinitis and patients with severe allergic rhinitis based on the Allergic Rhinitis and its Impact on Asthma severity items. *J Allergy Clin Immunol*. 2007;120:359-65.
 19. Bonini S, Bonini M, Bousquet J, Brusasco V, Canonica GW, Carlsen KH, Corbetta L, Cummiskey J, Delgado L, Del Giacco SR, Haahtela T, Jaeger S, Moretti C, Palange P, Passalacqua G, Passali D, Pedersen BK, Popov T, Rasi G, Ventura MT, Vignola AM. Rhinitis and asthma in athletes: an ARIA document in collaboration with GA2LEN. *Allergy*. 2006;61:681-92.
 20. Prenner BM, Schenkel E. Allergic rhinitis: treatment based on patient profiles. *Am J Med*. 2006;119:230-7.
 21. GK Scadding, SR Durham, Scadding GK, Durham SR, Mirakian R, Jones NS, Drake-Lee AB, Ryan D, Dixon TA, Huber PA, Nasser SM; British Society for Allergy and Clinical Immunology. BSACI Guidelines for the management of allergic and non-allergic rhinitis. *Clin Exp Allergy*. 2008;38:19-42.

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