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Is the Allergic Rhinitis and its Impact on Asthma classification useful in daily primary care practice?

To the Editor:

In 2001, the Allergic Rhinitis and its Impact on Asthma (ARIA) initiative proposed a new classification for allergic rhinitis (AR) on the basis of the duration of symptoms and their effect on the quality of life and formulated evidence-based guidelines for the treatment of this disease.[1] AR is a major primary health care problem, and the ARIA guidelines were developed primarily to assist general practitioners (GPs) in their management of this condition. The classification scheme is the basis of the stepwise treatment recommendations and should be tailored to the AR patient population in daily general practice.

During the pollen season of 2003, we conducted a cross-sectional survey in general practice in Belgium. Ninety-five Belgian GPs enrolled 804 patients who presented with symptoms of AR. For each patient, a questionnaire covering the duration, severity, symptomatology, and management of the disease was completed. In a previous article, we described the characteristics of the patients in the different ARIA classification groups, and we compared the management of AR in daily primary care practice with the ARIA recommendations.[2] The results demonstrated that the classification of AR as persistent and intermittent, on the basis of the duration of disease, is not equivalent to the previous, unsatisfactory classification of AR as perennial or seasonal. These findings are similar to those from large epidemiological studies in the general population,[3,4] in primary care practice,[5] and in specialty practice.[6]

TABLE I. Symptom scores in the new mild, moderate, and severe AR groups*

	Mild AR (165)	Moderate AR (369)	Severe AR (270)	*P*
Rhinorrhea†	52.1	60.7	61.5	NS
Nasal congestion†	42.4	61.5	72.2	<.0001
Nasal itch†	35.1	51.8	50.4	.007
Sneeze†	55.8	61.0	67.4	.01
Eye symptoms†	33.3	37.9	45.9	<.0001
Headache†	4.2	12.5	19.2	<.0001
Somnolence†	1.8	9.8	13.3	.0001
Troublesome symptoms (%)	47.9	81.4	90.4	<.0001

NS, Not significant.
*Statistical analyses with χ^2 test for trend (Medcalc, version 8.1.0.0, Medcalc Software, Mariakerke, Belgium).
$P < .05$ = statistically significant.
†Each symptom score is expressed as the percentage of patients with a score of 3 or 4 (symptoms were scored on a 4-point scale evaluating whether AR manifests by these symptoms: 1 = never/rarely, 2 = occasionally, 3 = frequently, or 4 = always).

On the other hand, the usefulness and validity of the classification of AR severity as mild or moderate-severe, on the basis of the impact of AR on quality of life, are not verified with data. The results of our survey indicate that moderate-severe AR indeed represents a higher burden of disease than mild AR, as reflected by the higher scores for nasal and nonnasal symptoms accompanying AR and the more complicated diagnostic and therapeutic management in moderate-severe compared with mild rhinitis.[2] An important finding in our data is the disproportionate size of the diagnostic groups, with the preponderance of subjects classified as moderate-severe rhinitis, 89.3%, and only 10.7% classified as mild. These data are similar to results of a year-round assessment in general practice in France, in which 93% of the 3052 patients with AR enrolled were classified with moderate-severe rhinitis.[7]

We address the imbalance between mild and moderate-severe AR and propose a refinement of the current ARIA classification for AR severity.

Allergic Rhinitis and its Impact on Asthma defines the severity of AR on the basis of 4 quality of life items: (1) impairment of sleep; (2) impairment of daily activities, sports, or leisure; (3) impairment of school or work; and (4) troublesome symptoms. If 1 or more of these items are present, rhinitis is classified as moderate-severe.[1] In our study, abnormal sleep was reported by 37.1% of the patients; impairment of daily activities, sports, or leisure by 71.3%; impairment of work or school by 53.2%; and troublesome symptoms by 77.6%.[2] Because 86.9% of the patients with moderate-severe AR considered their symptoms troublesome and only 9.8% of the patients reported troublesome symptoms in the absence of impairment of daily activities/sports/leisure, school/work, or

TABLE II. Diagnostic and therapeutic management in the new mild, moderate, and severe AR groups*

	Mild AR (165)	Moderate AR (369)	Severe AR (270)	*P*
Allergy testing (ever) (%)	43.6	51.2	64.4	<.0001
Treatment prescribed (%)				
Oral antihistamines	70.3	84.8	85.9	.0002
Nasal antihistamines	11.5	8.1	9.3	NS
Nasal glucocorticosteroids	46.7	54.7	70.0	<.0001
Oral glucocorticosteroids	3.0	3.8	8.9	.004
Nasal decongestants	17.6	15.4	23.7	NS
Topical eye medication	14.5	19.0	16.7	NS
Specialist referral (%)	7.9	6.2	13.3	.02

NS, Not significant.
*Statistical analyses with χ^2 test for trends (Medcalc version 8.1.0.0).
$P < .05$ = statistically significant.

sleep, the report of troublesome symptoms does not add appreciably to the assessment of disease severity. Furthermore, impairment of daily activities/sports/leisure and impairment of school/work both lead to a diminished quality of the active daily life, and we found an important overlap between these 2 items. Although more patients experienced discomfort from AR during their personal than during their professional life, 91.1% of those who reported problems at school or work were also bothered during daily activities, sports, or leisure.

On the basis of these findings, we suggest a modification in the current assessment of AR severity defined by ARIA. We propose to eliminate the question on the troublesome symptoms as a key issue in the assessment of AR severity, and to recombine the question on impairment of daily activities, sports, and leisure and the question on the impairment of school or work into 1 question evaluating the quality of the active daily life.

Taken together, this results in 2 questions to evaluate the severity of AR:

1. Do your symptoms of AR cause sleep disturbance?
2. Do your symptoms of AR cause impairment of your daily personal (daily activities, leisure, sports) and/or professional life (school, work)?

In this model, the severity of AR is classified into 3 groups, with patients responding ''no'' to both questions classified as mild, patients answering ''yes'' to 1 of the 2 questions as moderate, and patients answering ''yes'' to both questions as severe.

Categorization of the 804 patients from our survey according to this empirical model resulted in 20.5% with mild rhinitis, 45.9% with moderate rhinitis, and 33.6% with severe rhinitis. Table I compares symptom scores and Table II the diagnostic and therapeutic management in the new mild, moderate, and severe AR groups.

For all symptom scores except rhinorrhea, a linear increasing trend was found from mild to moderate to severe AR. Furthermore, the proportion of patients considering their symptoms troublesome, the degree of allergy testing, and the prescription rate of nasal and oral glucocorticosteroids demonstrated a significant trend upward with increasing AR severity category.

In conclusion, we propose to categorize the severity of AR into 3 instead of 2 groups, which in turn allows a more gradual stepwise therapeutic approach. On the basis of the results of our study in general practice, we suggest a modification in the current assessment of AR severity, using the 4 questions defined by ARIA. We here propose a very easy to use and to remember combination of 2 questions: 1 evaluating the patient's quality of daily life and 1 evaluating the patient's quality of sleep.

Classification of our patient population according to this empirical model results in 3 important groups, with the moderate group containing most patients. The difference in disease severity among these 3 newly defined groups is reflected by the increasing symptom scores, the higher degree of allergy testing, and increased prescription of glucocorticosteroids from mild to moderate to severe AR.

Of course, this proposed modification in classification for AR severity needs to be validated in large patient groups. Because the ARIA guidelines were mainly developed for GPs, it is particularly important that the classification is applicable to the patient population in primary care practice. However, it would also be interesting to evaluate which types of patients with AR remain undiagnosed in the general population and which types are found in specialist practice.

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