

# Allergic Rhinitis and its Impact on Asthma (ARIA)

## In collaboration with the World Health Organisation

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The treatment of rhinitis has been improved in recent years by a better knowledge of the mechanisms of the disease and the availability of effective new treatments. Practice guidelines incorporating these advances have been found to improve patient care for those with allergic rhinitis. ARIA (Allergic Rhinitis and its Impact on Asthma), an NGO working in partnership with WHO, provides the first set of guidelines which can be used worldwide. The ARIA guidelines consider the treatment of patients with rhinitis and offer for the first time an evidence-based documentation of recommendations. Moreover, this document proposes to assess the allergic patient globally since many patients with rhinitis have concomitant asthma and most asthmatics have concomitant rhinitis.

The ARIA initiative was developed to improve the management of allergic rhinitis and to complement the GINA guidelines, the gold-standard for the management of asthma. The ARIA initiative and its guidelines have also been adapted for use in the developing countries.

### Needs for guidelines in the management of allergic rhinitis:

- Allergic rhinitis represents a global health problem. It is a common disease worldwide affecting from 5 to 50 % of the population, and its prevalence is increasing.
- Although allergic rhinitis is not usually a severe disease, it alters the social life of patients, and affects school performance and work productivity.
- Moreover, the costs of rhinitis are substantial.
- Guidelines have been proposed within the past decade and their implementation was found to improve the condition of patients with allergic rhinitis.
- In developing countries, the ISAAC study showed that seasonal allergic rhinitis (hay fever) is an important problem affecting up to 50% of adolescents. A high prevalence has been observed in many European countries, the US and Australia but also in African countries like Guinea, Ivory Coast and Nigeria, Asian countries like India and South-American countries like Paraguay and Peru.
- The treatment of allergic rhinitis follows guidelines that cannot be completely implemented in some low-income developing countries due to the availability and affordability of treatment. Thus, guidelines need to be adapted to local conditions and every effort should be made to propose an effective and affordable treatment for all patients in the world.

### Needs for new guidelines in the management of allergic rhinitis:

The previous guideline, the International Consensus on Rhinitis was a major step forward and was recently validated for the treatment of seasonal allergic rhinitis.

However,

- This guideline was not evidence-based and new drugs have become available since 1995.
- It was mainly applicable to developed countries.
- Moreover, the ARIA guidelines are targeting the patient globally instead of treating each target organ individually.

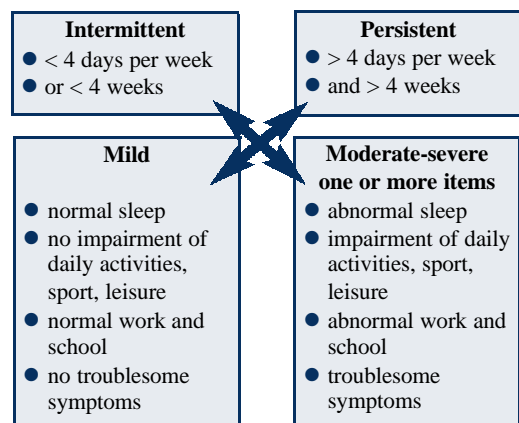
### Goals of ARIA:

The ARIA guidelines were developed as state-of-the-art educational materials for the specialist as well as for the primary caregiver:

- To update their knowledge of allergic rhinitis.
- To highlight the impact of allergic rhinitis on asthma.
- To provide an evidence-based documented revision on the diagnosis methods.
- To provide an evidence-based revision of the treatments available.
- To propose a stepwise approach to the management of the disease.
- To assess the magnitude of the problem in developing countries.
- To propose an available and affordable effective treatment to all patients in the world.

### Outline of ARIA:

- In the ARIA document, a new subdivision of allergic rhinitis has been proposed, with patients having either intermittent or persistent rhinitis. The severity of allergic rhinitis has been classified as "mild" or "moderate/severe" depending on the severity of symptoms and quality of life outcomes.



- The management of allergic rhinitis may include allergen avoidance, medications (pharmacological treatment), immunotherapy or education. Surgery may be used as an adjunctive intervention in a few, highly selected patients. Depending on the category and severity of

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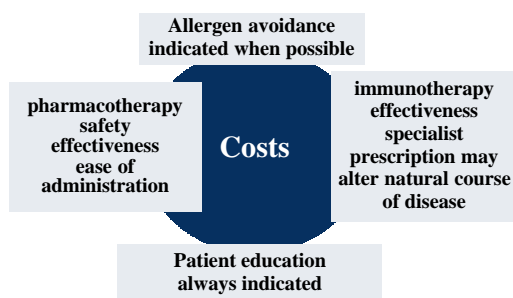
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allergic rhinitis, a stepwise therapeutic approach has been proposed.



### The management of rhinitis is evidence-based:

Recommendations were based on randomised-controlled trials carried out on studies performed with the previous classification of rhinitis since trials have not been carried out using the new classification.

### Strength of evidence for treatment of rhinitis

intervention	SAR		PAR	
	adult	children	adult	children
oral anti-H1	A	A	A	A
intranasal anti-H1	A	A	A	A
intranasal CS	A	A	A	A
intranasal cromone	A	A	A	A
subcutaneous SIT	A	A	A	A
sublingual/nasal SIT	A	A	A	
allergen avoidance	D	D	D	D

A: recommendation based on RCT or meta-analysis

D: recommendation based on the clinical experience of experts

SAR: seasonal allergic rhinitis

PAR: perennial allergic rhinitis

### Asthma and rhinitis co-morbidity:

Asthma and rhinitis are common co-morbidities suggesting the concept of "one airway, one disease".

- Epidemiological studies have consistently shown that asthma and rhinitis often co-exist in the same patients. It appears that at least 60% of asthmatics suffer from rhinitis. Furthermore, around 20-30% of patients with allergic rhinitis also have asthma. Patients with non-allergic asthma also commonly present with rhinitis. Non-specific bronchial hyperreactivity is more common in patients with rhinitis than in the general population.
- In normal subjects, the structure of the airway mucosa of the nose and the bronchi share similarities. The major difference is that in the nose there is a rich vascular supply that accounts for nasal obstruction during the inflammation of rhinitis, whereas, in the bronchi, smooth muscles account for bronchospasm during the inflammation of asthma.
- The recent progress achieved in elucidating the cellular and molecular biology of airway disease has clearly documented that inflammation plays a critical role in the pathogenesis of both asthma and rhinitis. The same inflammatory cells (T-

cells, eosinophils) and Th2-like cytokines are found in nasal and bronchial biopsies but epithelial shedding is not a common feature of rhinitis. Moreover, remodelling appears to be less extensive in rhinitis.

- Quality-of-life studies have strongly suggested a relationship between rhinitis and asthma. It seems that nasal and bronchial symptoms are combined to induce an impaired quality of life in patients suffering from both diseases.

In the ARIA document it is recommended that patients with persistent allergic rhinitis should be evaluated for asthma by history, chest examination and, if possible and when necessary, the assessment of airflow obstruction before and after bronchodilator. Patients with asthma should be appropriately evaluated (history and physical examination) for rhinitis. A combined strategy should be ideally used to treat the upper and lower airway diseases in terms of efficacy and safety.

### ARIA programme:

- The first phase of the ARIA programme was the development of evidence-based guidelines during a workshop held in December 1999. This document has been endorsed by several allergy, respiratory, ENT and pediatric associations.
- The second phase of the ARIA project has been to produce materials to help improve delivery of care to those with rhinitis and asthma. Shorter documents based on the report have been developed. In particular a pocket guide is available and a slide kit will be available soon.
- The efforts of ARIA should be directed to the implementation of guidelines in low income developing countries. ARIA guidelines need to be adapted to the local situation as well as to overcome social and cultural barriers. In collaboration with the International Union Against Tuberculosis and Lung Diseases (IUATLD), a specific section of the full-length document was adapted for management of rhinitis in developing countries. A joined ARIA-IUATLD programme has been started to assess the magnitude of allergic rhinitis in these countries to confirm the results of the ISAAC study using a more detailed questionnaire. Then, a pocket guide specifically devoted to low-income countries will be developed.

### The ultimate goals of ARIA are:

- To translate evolving science on rhinitis into recommendations for the management and prevention of the disease.
- To better assess the interactions between rhinitis and asthma.
- To increase awareness of rhinitis and its public health consequences.
- To make effective treatment of rhinitis available and affordable for every patient in the world. ■

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