Allergic Rhinitis and Co-morbidities Training Module (ARCTM)

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Allergic rhinitis is the most common respiratory disorder in most countries of the world. It is estimated that 600 million people suffer from this condition. ISAAC study [1] reports prevalence up to 40%. 80% of children with bronchial asthma have associated allergic rhinitis and 30% of children with allergic rhinitis develop asthma later [2]. Reports from India shows that 1 out of every 6 person has allergic rhinitis [3]. Although a cause of significant widespread morbidity, allergic rhinitis is often viewed rather erroneously as trivial disease. It may significantly affect the Quality of Life (QOL) of the child by causing fatigue, headache, cognitive impairment and other associated symptoms. Allergic rhinitis may be associated with many comorbid conditions like conjunctivitis, pharyngitis, sinusitis, asthma, eczema, otitis media, lymphoid hyperplasia, obstructive sleep apnea, speech impairment, failure to thrive, reduced quality of life, family disruption and impaired sexual quality of life in adults. This module is prepared with an objective to provide practicing doctors the evidence based approach, by reviewing the data in medical literature as per ARIA [allergic rhinitis impact on asthma] Guidelines and to suit our needs .

CLINICAL FEATURES

Allergic rhinitis is defined as a symptomatic disorder of nose induced by IgE mediated inflammation, after allergen exposure of the nasal mucous membrane. It is a condition manifested by nasal blockage, rhinorrhea, sneezing, and itching; any 2 of the above 4 symptoms must be present for >1 hr every day for >2 weeks to diagnose allergic rhinitis. Also there has to be some associated symptoms such as facial pain, loss of sense of smell, and postnasal drip. Some individuals may develop sinus infection and disturbed sleep as well. Severity is classified as shown in ***Fig.*1**.

NASAL EXAMINATION

A careful external and internal examination of nose is essential in diagnosing allergic rhinitis.

1. A deviated nasal septum can sometimes be apparent externally.
2. Gross nasal polyps can produce expansion of nasal bones.
3. A horizontal crease above the tip of the nose

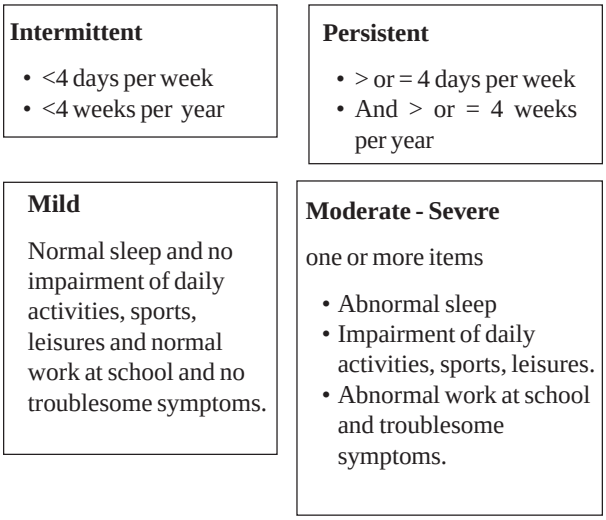

FIG. 1 *ARIA classification of allergic rhinitis.*

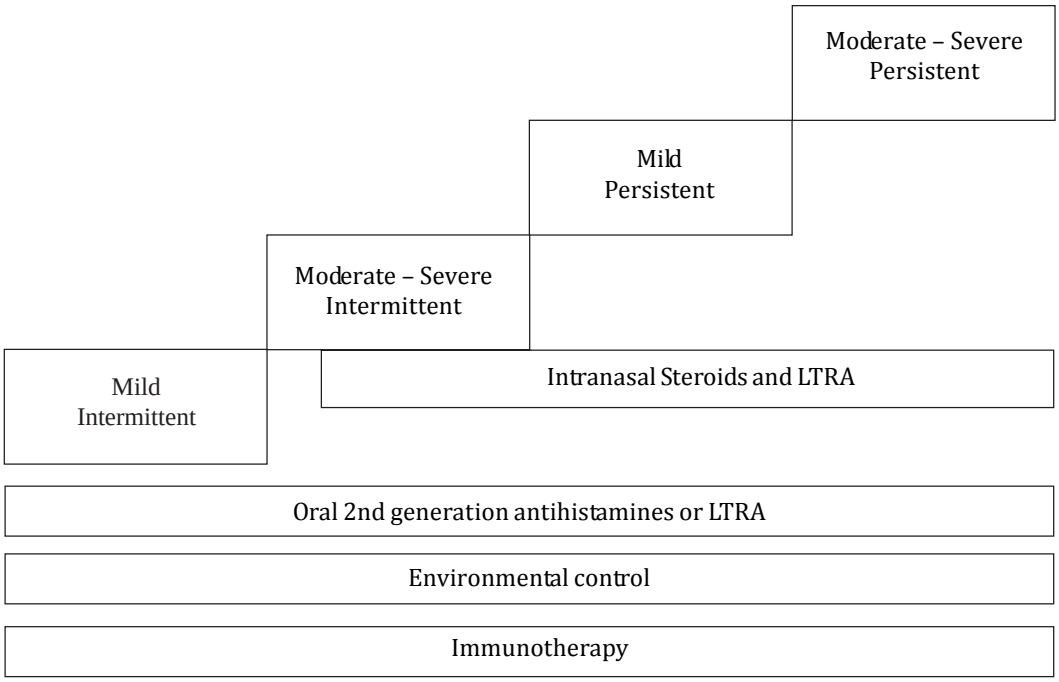

FIG. 2 *Treatment of allergic rhinitis (ARIA guidelines). LTRA: leukotriene release inhibitor.*

called 'Darrier's Line' is characteristic feature of marked allergic rhinitis. The Darrier's line is caused by the patient persistently rubbing the nose from below upwards with the palm of the hand.

4. 'Allergic salute' is done to relieve itching and free edematous turbinates from the septum.

5. The patient may exhibit facial grimaces like nose wrinkling and mouth wrinkling which relieves the nasal itching of the rhinitis (allergic mannerism).

6. With the worsening of symptoms, many children may develop bluish-black discolorations under the lower eye lids which are termed 'allergic shiners'. These discolorations are caused by venous stasis in the areolar tissue of the lower palpebral grooves from pressure on veins by edematous allergic mucous membranes of the nasal and paranasal cavities.

7. An internal examination using a simple nasal speculum can show an anterior deviation of the septum, narrowing of the nasal valve and inferior turbinate hypertrophy.

8. Nasal polyps can easily be confused with swollen inferior turbinates. Nasal polyps are non-tender and greyish, whereas swollen turbinates are tender and pale purple or pink.

MANAGEMENT

Allergic rhinitis is mainly a clinical diagnosis and management is mainly four fold: environmental control, pharmacotherapy, treatment of co-morbid conditions; and immunotherapy (***Fig.*2**). Recognizing allergy triggers and avoiding them is the first step towards controlling allergic symptoms. Avoid allergic triggers like dust mite, pollen grain, animal dander, cockroach, moulds, cold air, cigarette smoke, firewood smoke, mosquito coils, etc.

1. *Second generation antihistamines:* It should be prescribed due to their favorable efficacy and safety rate. SGA have greater selectivity for peripheral H_1 receptors. It has anti-allergic effect independent of action at histamine receptors and long term treatment with SGA is safe. Drugs used are cetrizine, levocetrizine, fexofenadine and loratidine.

2. *Intranasal steroids*: INS are the first line drug for

treatment of moderate to severe allergic rhinitis. It is the most efficacious medication available and it can improve all symptoms of allergic rhinitis as well as allergic conjunctivitis. Quality of life is better compared to antihistamines. Main INS are budesonide, beclomethasone, fluticosone propionate and mometasone.

3. *Anti-leukotrienes (monteleukast***)**: It is indicated in seasonal allergic rhinitis, pre school children and allergic rhinitis associated with other comorbid conditions like asthma and conjunctivitis. Although combinations of antihistamines with monteleukast are beneficial in several studies, it is not recommended.

We conducted a national TOT at Jaipur, Zonal TOTs at Chennai, Mumbai and Hyderabad following which we are planning to have 35 workshops throughout the country. I thank the National Coordinator, Dr H Paramesh and National Convener, Dr Major K Nagaraju for the help and guidance to implement this program.

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