

Clinical Approach in Patients with Respiratory Allergy

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1. Allergy is a systemic disease. Clinical presentations may include allergic rhinoconjunctivitis, asthma, atopic dermatitis, food allergies and anaphylaxis.
2. The incidence of allergic diseases is rapidly increasing in developed countries.
3. Risk factors include heredity, infant feeding, environment during first few years of life, childhood infections and second hand cigarette smoke exposure.
4. Skewing of the cellular immune response to a Th2 phenotype predisposes children to the development of allergen-specific IgE.
5. Allergen-specific IgE binds to receptors on mast cells and basophiles. Binding of allergens to these IgE will trigger release of inflammatory mediators.
6. Influx of eosinophils during the late phase response perpetuates allergic inflammation. Eosinophils release mediators that lead to tissue damage.
7. Allergic rhinitis significantly reduces quality of life and affects emotional well-being and learning ability. May also lead to sleep apnea, sinusitis, otitis media, dental malocclusion and abnormal facial development.
8. Allergic rhinitis is an important risk factor in the development of asthma in young children.
9. Diagnosis of AR includes history, physical examination, nasal cytology and specific IgE determination by prick skin test or blood tests.
10. Allergen avoidance is the most important treatment for any allergic disease. House dust mite (HDM) is the major allergen in AR, asthma and atopic dermatitis in Hong Kong.
11. Effective HDM avoidance measures include the use of microfibre allergen barrier covers on beddings, 60° hot washing of beddings, and removal of carpets, stuffed toys and upholstery.
12. The ideal anti-allergic compound should have potent anti-inflammatory as well as anti-histamine activities.
13. The new drug desloratadine has the most potent anti-histamine activity of all available anti-histamines.
14. Desloratadine also has mast cell stabilizing effects and inhibits the release of pro-inflammatory cytokines.
15. Effective treatment of AR by desloratadine has been shown to improve asthma symptom score and reduce the use of rescue medications in asthma patients.
16. Intranasal corticosteroid (INCS) is the most effective drug treatment for AR.
17. The third generation INCS fluticasone and mometasone have the highest receptor binding affinity and the lowest bioavailability.
18. Intranasal beclomethasone has been shown to delay bone growth in children whereas mometasone had no effect on growth.
19. Specific allergen immunotherapy has been shown to be effective in the treatment of allergic rhinitis and asthma.
20. Traditional subcutaneous immunotherapy (SCIT) is inconvenient, carries a risk of anaphylaxis and requires special training for administration.
21. Sublingual immunotherapy (SLIT) using 50 to 200 times the dose of SCIT has been shown in small studies to be as effective as SCIT in the treatment of AR.
22. SLIT is extremely safe and can be self-administered by patients.