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Editorial

Allergic march: Rhinitis to asthma

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Allergic Rhinitis (AR) and Bronchial Asthma (BA) are considered different manifestations of one systemic pathology. With the increased burden of both diseases, there is an ever-growing interest in this interaction. The epidemiological study shows the presence of AR in 78% of patients with BA, and symptoms of BA in 40% of patients with AR.[1] The evolution of AR to BA occurs in 50% over a period of 6.5 years.[2]

It is AR that starts first and then this allergic problem marches to involve the lungs i.e. BA.[3] The post-nasal mucus drip with aspiration, nasal-bronchial reflex and release of mediators in systemic circulation plays a major role. This editorial discusses the similarity between the two manifestations and the author's experience over two decades, of reduced BA exacerbations with timely AR treatment.

There is the anatomical similarity of lining mucosa i.e., pseudostratified ciliated columnar epithelium and the presence of mucosal-associated lymphoid tissue. The difference is lower airways have smooth muscles while the upper airway has venous sinusoids and mucous glands. Thus, the same trigger will lead to rhinorrhoea and nose block, while bronchoconstriction in the lungs.

Both are caused by Type 1 allergic reaction i.e., IgE mediated inflammatory response. They are triggered by common airborne allergens (pollen, mites, moulds, animal fur) and pollutants, infections or drugs, and have similar inflammatory cells (mast cells, eosinophils) and mediators (histamine, leukotrienes, prostaglandins). The nasal bronchial reflex exists is further proven by an increase in inflammatory cells and mediators in lung mucosa following nasal provocation test.[4]

Another similarity is in the treatment. Both have the same preventive measures (avoidance of allergen exposure) and therapy (anti-histamines, anti-leukotrienes, intranasal steroids, anti-IgE, immunotherapy) which reduce the use of bronchodilators. Also, as recommended by ARIA (Allergic rhinitis and its impact on asthma) guidelines, treating AR, reduces the risk of asthma.[5]

Due to this linkage, it is important to examine lower airways in patients of AR and nose in patients of BA, to have a common approach and better control of disease, as in patients with poor BA control, the majority have uncontrolled AR.[6]

Conflict of Interest

None.

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