

Asthma As a Respiratory Disorder: A review

Sadia Sidra Aziz* and Razia Iqbal

Department of Zoology, University of Gujrat, Gujrat, Pakistan,

[*sadia.sidra.aziz@gmail.com](mailto:sadia.sidra.aziz@gmail.com)

Abstract

This article reviews causes, symptoms, genetic basis of asthma and pharmaceutical therapies currently being practiced. Asthma is a worldwide respiratory disorder characterized by recurring conditions of inflammation and narrowing of respiratory passage ways, termed as bronchoconstriction; bronchial hyper-responsiveness; bronchospasm; chest tightening; shortness of breath; etc. About 300 million people suffer from asthma globally with 250,000 annual deaths attributed to asthma. In many populations, the main cause of increased occurrences of asthma is lack of awareness among general public. Smoking, allergens, microbes, pollutants, dust, chemicals, vapors, fumes, exercise etc. act as stimulants and triggers of asthma. Various gene-gene and genetic-environmental factors act together resulting in asthmatic pathogenesis. Various loci have been identified that play potential role in this regard. Genetic polymorphism among patients makes the treatment a bit difficult as patients with similar symptoms can have varied response to same medications and therapeutic strategies. Asthma is not completely curable; therefore, most medications aim to lower the exacerbations rather than fixing the underlying causes and mechanisms of the disease. Short and Long acting beta-antagonists (SABAs and LABAs) and inhaled corticosteroids (ICS) have been effective against asthma. Phytomedicines and biological agents such as omalizumab are being developed for the modulation of asthma-related immunologic and cell-signaling mechanisms. Asthma and psychological disorders are often found to be correlated. The need arises for more public awareness regarding asthma, improved genetic analysis techniques, assessment of underlying molecular mechanisms, optimization of current therapeutic strategies and development of new personalized target drugs for efficient prevention and control against asthma.

Keywords: Asthma, bronchial hyper-responsiveness, bronchospasm, SABAs, LABAs, ICS

