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EDITORIAL

Allergic rhinitis and asthma: the global burden

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The burden of allergic diseases is on the rise, both in the developing as well as the developed world. Allergy results from the abnormal response of the immune system of the body. It encompasses both acute as well as chronic conditions. Allergic rhinitis (AR) and asthma are chronic in nature, while anaphylaxis, food, drug and insect allergies are often acute. However, allergy is one of the commonest causes of chronic medical problems and affects both children and adult. It is estimated that 400 million people suffer from AR while 300 million suffer from asthma [1]. AR in itself is a risk factor for asthma. The number of asthmatics may rise to 400 million by 2025 [2]. A quarter of million people die of asthma every year.

Indian Study on Epidemiology of Asthma, Respiratory Symptoms and Chronic Bronchitis (INSEARCH) revealed the prevalence of asthma at 2.04%, affecting 17.23 million people aged above 15 years [3]. Among children the mean prevalence stands at 7.2±5.4% [4]. One of the several allergic conditions affects 20% to 30 % of total Indian population [5]. There is no data available which can assess the economic burden of these two diseases in India. The Global Initiative for Asthma (GINA) had earlier estimated the prevalence of asthma in Southern Asia (Bangladesh, Bhutan, India, Nepal, Seychelles and Sri Lanka) at 3.5% for a total population of 1.21 billion [6]. INSEARCH identified higher odds of asthma associated with advancing age, tobacco smoking and environmental tobacco smoke.

In Australia, The National Health Survey reports that in 2005 there were over three million cases of allergic rhinitis and over two million cases of asthma. The prevalence of AR was predominant in younger age group (25-34 years), while asthma was more common among children. Tobacco smoke, SO_2 and NO_2 were major pollutants implicated in the development of asthma. The economic burden from all allergic conditions in Australia was estimated to be $7.8 billion [7].

In United States of America, 40-50 million people suffer from one or the other forms of allergy [1]. Out of these, over 18 million adults and 7 million children suffer from asthma [8,9]. AR is a problem for 10% and 30% of all adults and as many as 40% of children [10]. The economic burden for asthma and AR has been found to be US$19.7 billion and up to $20.9 billion respectively [2]. The cost of treating AR has almost doubled from 2000 to 2005 ($6.1 billion to $11.2 billion) [11]. Asthma has resulted in annual loss of more than 14 million school days per year for children and is the leading cause of work absenteeism for adults [1]. In Canada about 2.5 million people suffer from asthma [12], while 10-15% population suffer from AR. For UK, 1 in every 135 of population suffers from AR, while 1 in every 192 has asthma [13]. Among South American countries, Brazil houses 15 million asthmatics with prevalence rates of 4.3% and 19% among children and adolescents respectively [14]. For AR, the data stood at 12.6% and 14.6% for children and adolescents respectively.

Among the Middle Eastern countries, survey in UAE has revealed prevalence of asthma in 9.8% of young adults [15], while the prevalence of AR has been reported to be between 7-9% [16]. Allergies in Middle East Survey from 5 countries (Egypt, Lebanon, Saudi Arabia, Iran and the United Arab Emirates) reported symptoms of AR in 9% of study population [17]. Being desert countries, this region has hot and humid climate. Both these factors have profound effect in the development of allergies. Dermatophagoides was one of the most common allergen reported from this part of the globe [18].

Asthma and AR are also common in Qatar [18]. Although the exact prevalence of asthma in the adult population is not known in Qatar; a previous study estimated a prevalence of 19.8% of asthma and 30.5% of allergic rhinitis in schoolchildren [19]. Additionally, Ibrahim et al. tried to estimate the economic burden and conrtol of asthma in adults, and concluded that despite the very high gross domestic product per capita in Qatar and the high health expenditure per capita, this did not seem to have led to better asthma care and conrtol and recommended to establish a national asthma service improvement program in order to achieve cost effective asthma care in the country [20].

The increasing trend of allergic diseases warrants better management. The economic burden is immense and better task force is required to treat the rising number of allergic patients. Environmental risk factors including pollutants like tobacco smoke contributes to the rising trend. Several organizations work at local and national levels to combat allergic diseases by collecting useful data and spreading knowledge regarding prevention and treatment. A global coordination between these bodies may further help.

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Competing Interest

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