

Asthma prevalence & risk factor in children: Indian Scenario

Gedam DS

Dr D Sharad Gedam, Professor of paediatrics, L N Medical college, Bhopal, India & Editor- in- chief, IJMRR

Address for correspondence: Dr D Sharad Gedam, Email: editor.ijmrr@gmail.com

Abstract

Various risk factors play a role in triggering allergic diseases among low-income households in developing countries. Indoor smoking, pets, overcrowding are some of the known factors for asthma.

Key words: Asthma, risk factor, low income countries.

Introduction

Asthma is chronic respiratory disorder characterized by hyper responsiveness of airway system by various stimuli. There is a complex interaction between various stimuli, mediators & airways. Asthma is characterized by following symptoms.

1. Recurrent episode of breathlessness with chest tightness, wheeze and cough.
2. Airflow obstruction characterized by decrease air entry on auscultation or by spirometry examination.
3. Hyper responsiveness to various inhaled or non inhaled stimuli.

Prevalance

Data related with prevalence in India is limited. It varies from 2.3 to 11.6 % in various studies conducted in India [1-8]. ISAAC study conducted in India in 14 centres has shown prevalence of 3.7 % & 4.5 % in 6-7 years & 14-15 years population [9].

National Family Health Survey-3 showed that the prevalence of bronchial asthma among school children of the age group 15-19 years in India is as little as 0.9%, whereas other studies showed varied results ranging from 1.9% to 16.6% in different age groups [10].

Although very less is known about contribution of each risk factor associated with asthma such as family history, type of fuel used, pet animals, indoor air pollution, birth order, smoking among family members, will help in adopting appropriate preventive strategies. There is statistically significance association between family

history, smoking in any of the family member & absence of smoke outlet at homes [11].

Gaffin JM et al revealed that early life exposure to allergens (house dust mite (HDM), furred pets, cockroach, rodent and mold), air pollution (nitrogen dioxide (NO₂), ozone (O₃), volatile organic compounds (VOCs), and particulate matter (PM)) and viral respiratory tract infections (Respiratory syncytial virus (RSV) and human rhinovirus (hRV)) has been implicated in the development of asthma in high risk children [12].

The presence of mold and water leakage in houses were the most important risk factors with indoor smoking for asthma [13]

George et al has done a study to determine the prevalence of bronchial asthma among children of 5 – 15 years and its environmental determinants in urban slum. In her study she has not found association between prevalence of asthma and presence of separate kitchen.

Although presence of pets (OR =2.70) and inadequate ventilation (OR =2.71) were independently associated with bronchial asthma in children of school going age. Multicentre study should be planned to identify modifiable risk factor India [12].

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Editorial

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