

A PILOT STUDY TO ASSESS THE ASTHMATIC PATIENTS IN THE CAPITAL STATE OF UTTARAKHAND

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ABSTRACT

Asthma is one of the most common chronic respiratory diseases in our country. The main objective of the study was to collect data about the profile of the asthmatic patients in Dehradun, Uttarakhand. The study was conducted through a structured questionnaire targeted on the asthmatic patients during the month of Jan 2009 to June 2009. The demographic characteristics of 336 patients with asthma gives the detail profile of asthmatic patient's distribution of Dehradun as classified on the basis of age and sex. It was evident from the study that male populations (75.6%) are more prone to asthma as compared to the females (24.4%). Another striking feature that emerged from this survey was the maximum prevalence of asthma in the age group of 20-29 years followed by infants belonging to the age group of < 10 years among both male and female populations. The high incidence of asthma in the age group of 20-29 years may probably be due to the allergy arising out of sudden exposure to dust and pollen which the children face while playing and going to the school and colleges. Pharmacists should educate the asthmatics how to use inhalers considering growing menace of asthma in the state. Safer drugs should be produced in the form of aerosol so that easy administration by the asthmatic patients and physicians of the state is possible for curing asthma. The health centers should be more equipped with the medicines to cure asthma in the state like Uttarakhand.

KEYWORDS: Asthma, Disease, Asthmatic patients, Drugs etc.

INTRODUCTION

Asthma is a common condition that has increased in prevalence throughout the world over the last 20 years. It is estimated that around 300 million people are affected across the world¹. The International Consensus Report on the Diagnosis and Management of Asthma (Global Strategy for Asthma Management and Prevention) gives the following definition: 'Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role, including mast cells, lymphocytes, neutrophils, and eosinophils. The chronic inflammation is associated with airway hyper-responsiveness that leads to recurrent episodes of wheezing, breathlessness, chest tightness, and coughing, particularly at night or in the early morning^{1, 2}. These episodes are usually associated with widespread, but variable, airflow obstruction within the lung that is often reversible either spontaneously or with treatment². It is a complex disease of varied etiology triggered by a number of various physiologic and environmental factors such as allergens, drugs, chemicals, exercise, cold dry air, infections and emotions³.

For clinically significant asthma, many countries have broad prevalence rates of around 5% in adults and 10% in children. Asthma increased for multiple reasons in developed countries but probably peaked in the early 1990s^{1, 4}. Mortality appears to be particularly high in urban and rural minority populations. The increased prevalence and severity of asthma in the metropolitan city correlates with environmental pollution, urbanization and change in the demography of the city. Asthma continues to place a heavy burden on patients and their families as well as the health-care system³⁻⁸.

The main aim of our study is to collect data of the asthmatic patients in Dehradun, Uttarakhand and thereby have a comprehensive knowledge of the factors influencing the asthmatic patients of the state and their medication pattern. On the basis of the study, the factors responsible for the spreading of these diseases have been analyzed and thereby suggesting some preventive measures for asthma.

MATERIALS AND METHODS

The study was carried out on patients who were being treated under the out patient departments (OPD) in different hospitals and private clinics of Dehradun and it was conducted through using a structured questionnaire targeted on the asthmatic patients during the month of Jan 2009 to June 2009. The demographic characteristics of 336 patients with asthma gives the detail profile of asthmatic patient's distribution of Dehradun as classified on the basis of age and sex. The questionnaire consists of Patient details (age, sex, occupation, and income), Family history of illness, Past medical history, Symptoms or Complaints, Diagnosis, Medication, Instruction for diet, Exercise, and Duration of illness etc. All the necessary and relevant information were collected from OPD cards, treatment charts, laboratory data reports, patient's history records and verbal communication with patients.

RESULTS

During the study period, 336 patients were included to study the asthmatic patients of Dehradun. It is evident from the study that 75.6% males are more prone to asthma as compared to 24.4% females (Figure 1). Another major striking feature of this survey is the maximum prevalence of asthma in the age group of 20-29 years (30.36%) followed by infants belonging to the age group of < 10 years (15.48%) among all the total patient population (Figure 2). The high incidence of asthma in the age group of 20-29 years may probably be due to the allergy arising out of sudden exposure to dust and pollen which the children face while playing and going to the school and colleges. However, the fairly high incidence of asthma in the age group of < 10 years probably is due to their low immune system and immediate exposure to the polluted environment. Incidence of asthma was found to decrease gradually with increase in age after 30 years till 60 years which may be due to the development of resistance or due to alertness among the asthma patients to consume anti-asthmatic drugs and perform regular exercise. A significant rise in asthmatic patients found after the age of 20 years among both males and females in both urban and rural sector may be due to the lowering down of resistance level with the age of negligence of taking anti-asthmatic drugs regularly. Improper awareness, self medication, poverty, environmental changes are some of the probable reasons for the sudden increase in the asthmatic patients. Environmental pollution, smoking and congested habitat with improper sanitation are the major reasons for the occurrence of asthma among the study population (Table 1). Aerosols containing salbutamol, salmeterol, fluticasone are found to be the most preferred route of drug administration among asthmatic patients for convenient and prompt relief. Asthmatic should avoid the practice of self-medication and consult doctors who may prescribe different corticosteroids and other suitable medications for long term cure. Corticosteroids including Budesonide, Fluticasone propionate, Beclomethasone dipropionate and Triamcinolone acetonide; Bronchodilators like Salmeterol, Salbutamol, Theophylline, Terbutaline and Aminophylline; Expectorants mainly Guaiphenesin, Bromhexine and Ipecac; and Anti-histaminics like Chlorpheniramine maleate are some of the most important drugs used for treating asthma (Table 2).

DISCUSSION

With appropriate asthma management, the disease can usually be controlled. Asthma must first be viewed as a chronic inflammatory disease, and therefore controlling airway inflammation must be emphasized. The goal is to control the disease so that the patient can function normally. Therapy should be guided by the severity of disease and should include education so the patient may become an active participant in the management of his or her disease. Pharmacists should educate the asthmatics how to use inhalers considering growing menace of asthma in the state. Poorly controlled asthma should be viewed as a failure of therapy, and a change in the treatment plan is warranted. Safer drugs should be produced in the form of aerosol so that easy administration by the asthmatic patients and physicians of the state is possible

for curing asthma. The health centers should be more equipped with the medicines to cure asthma in the state like Uttarakhand.

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Table 1: Major Reasons for the Occurrence of Asthma	
✓	Environmental pollution from vehicles
✓	Smoking cigarette and other tobacco products
✓	Congested habitat
✓	Improper sanitation in residential as well as working areas
✓	Direct contact or exposure to irritants like chemicals, dusts etc.
✓	Improper awareness about the triggering agents
✓	Self-medication practice
✓	Poverty status
✓	Environmental changes

Table 2: Drugs Commonly Used For the Treatment of Asthma

S. No.	Drugs Category	Name of the Drugs
1.	Corticosteroids	<ul style="list-style-type: none"> • Budesonide • Fluticasone propionate • Beclomethasone dipropionate • Triamcinolone acetonide
2.	Bronchodilators	<ul style="list-style-type: none"> • Salmeterol • Salbutamol • Theophylline • Terbutaline • Aminophylline
3.	Expectorants	<ul style="list-style-type: none"> • Guaiphenesin • Bromhexine • Ipecac
4.	Anti-histaminics	<ul style="list-style-type: none"> • Chlorpheniramine maleate

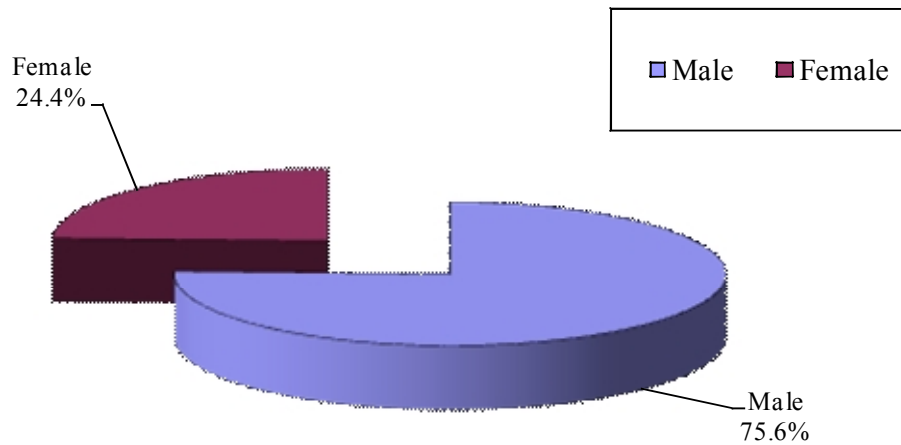


Figure 1: Gender Wise Distribution of Asthmatic Patients

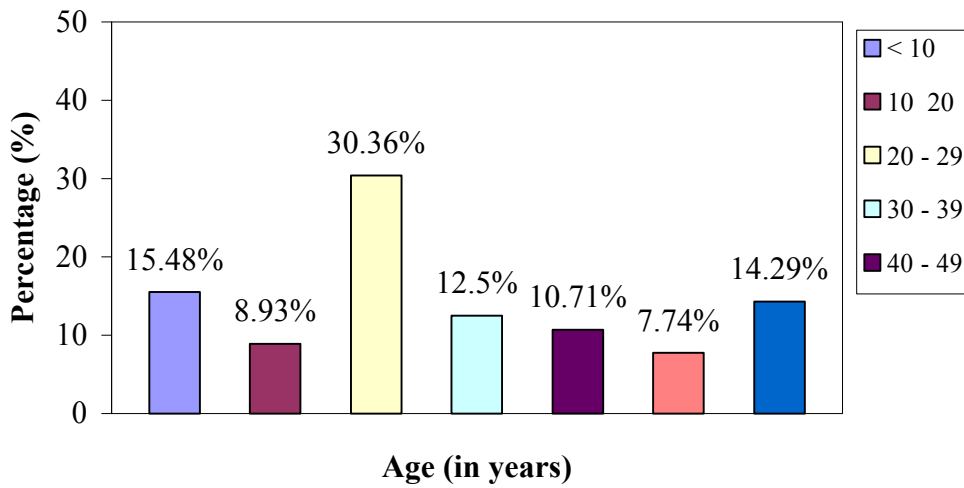


Figure 2: Age Wise Distribution of Asthmatic Patients

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