

# A study of clinical profile and factors associated with aggravation of disease in the patients of bronchial asthma at tertiary health care center

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## Abstract

**Background:** Bronchial Asthma, is a very common disease in India is a chronic inflammatory disorder of the airways associated with airway hyperresponsiveness that leads to recurrent episodes of wheezing, breathlessness, chest tightness and coughing particularly at night or in the early morning. **Aims and Objectives:** To study clinical profile and Factors associated with aggravation of disease in the patients of Bronchial asthma at tertiary health care centre. **Methodology:** This was a cross sectional study carried out in the patients of bronchial asthma at tertiary health care centre during the one year period i.e. June 2018 to June 2019 in the one year period the patients with written and explained consent with clinical features of Bronchial asthma were enrolled for the study so during the one year there were 108 patients were included into the study. All details of the study like age, sex, clinical features and aggravating factors if any were noted. The data was entered to excel sheet and analyzed SPSS 19 version software. **Result:** The majority of the patients were in the age group of >60 were 25.93%, followed by 20-30 were 23.15%, 50-60 were 19.44%, 30-40 were 17.59%, 40-50 were 13.89%. The majority of the patents were Male i.e. 51.85 % and Females were 48.15% The majority of the patients were having Frequent coughing spells -87.96%, Chronic cough in 80.56%, Chest tightening in 75.93%, Less energy during work in 72.22%, Breathless ness in 68.52%, Wheezing in 58.33%, Cough with Itching of Skin in 48.15%, Cough with Wheeze and Fever in 45.37%. The most common Aggravating factors were exposure to dust i.e. 94.44%, followed by exposure to cold air in 90.74%, exposure to pollen and particular food in 85.19%, Exposure to smoking and second hand smoking in 78.70%, H/o URTI in 67.59%. **Conclusion:** It can be concluded from our study that the majority of the patients old and very young the most common clinical features were Frequent coughing spells, Chronic cough Chest tightening etc. The most common Aggravating factors were exposure to dust followed by exposure to cold air exposure to pollen and particular food Exposure to smoking second hand smoking etc.

**Key Words:** Bronchial asthma, Allergic rhinitis, Atopic dermatitis.

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## INTRODUCTION

Bronchial Asthma, is a very common disease in India is a chronic inflammatory disorder of the airways associated

with airway hyperresponsiveness that leads to recurrent episodes of wheezing, breathlessness, chest tightness and coughing particularly at night or in the early morning. These episodes are usually associated with widespread but variable airflow obstruction that is often reversible either spontaneously or with treatment<sup>1</sup>. There has been a noticeable increase in the healthcare burden due to asthma globally. The prevalence and mortality from asthma have shown an upward trend during an era when quality medications are easily available for asthma<sup>2</sup>. While this increase in the prevalence of Asthma is rather global in nature, a difference does exist between the epidemiology, clinical spectrum and the management practices in India and those in west<sup>3</sup>. The risks for developing asthma depend on a complex interaction of

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hereditary and environmental factors. Risk factors are genetic predisposition (family history of atopy or asthma); perinatal factors (low birth weight, prematurity); exposure to allergens; infections (respiratory infections, especially those caused by respiratory syncytial virus); environmental air pollution; tobacco smoke; diet and obesity<sup>4</sup>. Some of the differences are attributable to differences in the environmental exposures and health care infrastructure in India while others could be truly genetic or ethnic in origin.<sup>5</sup> So in our study we have done the clinical features and aggravating factors of Bronchial asthma at tertiary health care centre.

## METHODOLOGY

This was a cross sectional study carried out in the patients of bronchial asthma at tertiary health care centre during the one year period i.e. June 2018 to June 2019 in the one year period the patients with written and explained consent with clinical features of Bronchial asthma were enrolled for the study so during the one year there were 108 patients were included into the study. All details of the study like age, sex, clinical features and aggravating factors if any were noted. The data was entered to excel sheet and analyzed SPSS 19 version software.

## RESULT

**Table 1:** Distribution of the patients as per the age

Age group	No.	Percentage (%)
20-30	25	23.15
30-40	19	17.59
40-50	15	13.89
50-60	21	19.44
>60	28	25.93
<b>Total</b>	<b>108</b>	<b>100.00</b>

The majority of the patients were in the age group of >60 were 25.93%, followed by 20-30 were 23.15%, 50-60 were 19.44%, 30-40 were 17.59%, 40-50 were 13.89%.

**Table 2:** Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	56	51.85
Female	52	48.15
<b>Total</b>	<b>108</b>	<b>100.00</b>

The majority of the patents were Male i.e. 51.85 % and Females were 48.15%

**Table 3:** Distribution of the patients as per the clinical features

Clinical features	No.	Percentage (%)
Frequent coughing spells	95	87.96
Chronic cough	87	80.56
Chest tightening	82	75.93
Less energy during work	78	72.22
Breathless ness	74	68.52
Wheezing	63	58.33
Cough with Itching of Skin	52	48.15
Cough with Wheeze and Fever	49	45.37

The majority of the patients were having Frequent coughing spells -87.96%, Chronic cough in 80.56%, Chest tightening in 75.93%, Less energy during work in 72.22%, Breathless ness in 68.52%, Wheezing in 58.33%, Cough with Itching of Skin in 48.15%, Cough with Wheeze and Fever in 45.37%.

**Table 4:** Distribution of the patients as per the disease aggravating factors

Aggravating factors	No.	Percentage
exposure to dust	102	94.44
exposure to cold air	98	90.74
exposure to pollen and particular food	92	85.19
Exposure to smoking and second hand smoking	85	78.70
H/o URTI	73	67.59

The most common Aggravating factors were exposure to dust i.e. 94.44%, followed by exposure to cold air in 90.74%, exposure to pollen and particular food in 85.19%, Exposure to smoking and second hand smoking in 78.70%, H/o URTI in 67.59%.

## DISCUSSION

Asthma is a heterogenous disease, usually characterized by chronic airway inflammation. It is defined by the history of respiratory symptoms such as wheeze, shortness of breath, chest tightness, and cough that vary over time and in intensity, together with variable expiratory airflow limitation (global initiative for asthma [GINA] 2014).<sup>6</sup> Asthma is currently one of the world's most common long-term noncommunicable disease; affecting about 300 million people worldwide<sup>7,8</sup> and number could increase further by another 100 million by year 2025.<sup>6</sup> Prevalence of asthma among developed countries is more (2.7–20%)[<sup>9-14</sup>] than reported from India.<sup>15</sup> In our study we have seen that the majority of the patients were in the age group of >60 were 25.93%, followed by 20-30 were 23.15%, 50-60 were 19.44%, 30-40 were 17.59%, 40-50 were 13.89%. The majority of the patents were Male i.e. 51.85 % and Females were 48.15% The majority of the patients were having Frequent coughing spells -87.96%, Chronic cough in 80.56%, Chest tightening in 75.93%, Less energy during work in 72.22%, Breathless ness in 68.52%, Wheezing in 58.33%, Cough with Itching of Skin in 48.15%, Cough with Wheeze and Fever in 45.37%. The most common Aggravating factors were exposure to dust i.e. 94.44%, followed by exposure to cold air in 90.74%, exposure to pollen and particular food in 85.19%, Exposure to smoking and second hand smoking in 78.70%, H/o URTI in 67.59%. These findings are similar to A. K. Singh *et al*<sup>16</sup> they found Most cases (52.9%) were in age group of 16–30 years followed by 32.5% in 31–45 years. More than half (55.6%) belonged to the

middle class in society. Majority (74.2%) were nonsmokers. Most common symptoms were cough, wheeze, and breathlessness 98.7%, 90.1%, and 88.1%, respectively. Nocturnal awakening was present in 2/3rd cases. Rhinitis (65%) was most common associated condition.

## CONCLUSION

It can be concluded from our study that the majority of the patients old and very young the most common clinical features were Frequent coughing spells, Chronic cough Chest tightening etc. The most common Aggravating factors were exposure to dust followed by exposure to cold air exposure to pollen and particular food Exposure to smoking second hand smoking etc.

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