



“A Study of Clinical Profile of Children with Bronchial Asthma in Eastern India”

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ABSTRACT **Background:** Asthma is a major public health problem worldwide. Asthma is very common in paediatric age group with immense social impact on children. The prevalence of Bronchial Asthma has increased continuously since the 1970s, and now affects an estimated 4 to 7% of the people worldwide.

Aim: To study clinical profile of childhood asthmatic patients admitted in paediatric ward of our hospital.

Materials and Methods: The present study was a prospective study which was conducted in the department of paediatrics J.L.N. Medical College & Hospital Bhagalpur. We studied 48 pediatric cases of bronchial asthma admitted to paediatric ward of our hospital within a period of one year from January 2016 to December 2016. We found that asthma is more prevalent in age group of 13 months to 5 years (39.5%), with male predominance (M=60.4%) with history of allergy in 36.67% of patients.

Conclusion: In our study we found statistically significant differences in clinical presentation of asthma in different age groups, gender wise, environmental wise and with different risk/triggering factors.

KEYWORDS : Bronchial asthma, allergy, passive smoking, triggering factors.

INTRODUCTION

Bronchial Asthma is a chronic inflammatory disorder of the airways 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. Asthma is very common in paediatric age group with immense social impact children. The prevalence of Bronchial Asthma has increased continuously since the 1970s, and now affects an estimated 4 to 7% of the people worldwide. An estimated 300 million people of all ages and ethnic backgrounds from all over the globe suffer from asthma and approximately 250,000 people a year die from it¹. While asthma is more common in affluent countries, it is by no means a restricted problem; the WHO estimate that there are between 15 and 20 million people with asthma in India. Acute asthmatic attacks cause significant morbidity and account for a significant number of emergency department consultations and hospital admissions¹⁻⁴. This study intends to evaluate clinical profile of asthmatic patients of paediatric age group.

MATERIAL AND METHODS

The present study was a prospective study which was conducted in the department of paediatrics J.L.N. Medical College & Hospital Bhagalpur within a period of one year from January 2016 to December 2016. After taking informed written consent and fulfilling inclusion criteria of asthmatic patients of age group 6 months to 12 years 48 patients were included in the study. Detailed history regarding past history of similar complaints, previous hospitalizations or previous major illness, similar history or illness in family, history of any drug or history suggestive of allergy was taken. History regarding presence of any risk factor like history of allergy to dust mite, drugs, food, smoker in family as well as triggering factor like viral infection or other factors for acute exacerbation of asthma was asked. History suggesting complications of asthma or its medications was asked. History of housing, locality, school performance of patient, growth of patient was also asked. Detailed general and systemic examinations were done to assess grades of severity of respiratory distress of asthma. Patients' routine investigations like Hemogram, ESR, CRP, chest X ray, AEC were done.

RESULTS

Table 1 Demographic profile of asthmatic patients

Profile	No.	Percentage	
GENDER	MALE	29	60.4
	FEMALE	19	39.6
AGE GROUP	6 Months -12 months	13	27.1
	13 months -5 years	19	39.5
	5 years -12 years	16	33.4
RESIDENTIAL AREA	Rural	34	71
	Urban	14	29

Table 2 Clinical presentation of asthmatic patients

Clinical features	No.	percentage
Nasal flaring	29	(60.4 %)
Tachypnoea	34	(70.8%)
Decreased alertness	7	(14.5%)
Cyanosis	2	(4.1%)
Tachycardia	25	(52%)

Table 3 Risk factors in asthmatic patients

Risk factors	No.	Percentage(%)
Allergy (food, dust mite, drugs)	17	35
Seasonal Variation	10	20.8
Family history	5	10.4
Passive Smoking	4	8.3
No risk factor	14	29.1

DISCUSSION

The present study was conducted in the department of paediatrics J.L.N. Medical College & Hospital Bhagalpur within a period of one year from January 2016 to December 2016. In which total 48 patients were selected who were diagnosed and known case of asthma. Patient's detailed history was taken and they were examined and investigated. Out of 48 patients 29(60.4%) patients were male and 19(39.3%) patients were female. (table 1) This suggests male predominance in prevalence of asthma. In one study conducted by Vink N.M et al⁵ shift in the prevalence of asthma occurs between 11.1 and 16.3 years. According to study conducted by Gissler et al⁶ Childhood asthma is more prevalent in boys than in girls. Finding in our study is supportive to this conclusion. Amongst 48 patients under study 13 (27.1%) patients were in age group 6 months to 12 months, while 19(39.5%) patients were in age group of 13 months to 5 year and 16 (33.4%) patients were of age between 5 years to 12 years. These results are consistent with those obtained by study conducted by DSY Lam et al and concluded that more than 90% of the children had their onset of asthma symptoms before 6 years of age⁷. In our study 34 (71%) patients were from rural area while 14 (29%) patients were from urban area. Yemaneberhan et al⁸ conducted study on prevalence of asthma and found that asthma prevalence rate was more in urban patients compared to rural) and similar finding was obtained by Keeley et al⁹. The results of our study were in contrast to the observations in previous studies as majority of our patients were from rural area. Depending on Clinical presentation we found that majority of our patients were presented with tachypnoea or increased respiratory rate i.e. 34(70.8%) patients while 60.4% patients were presented with nasal flaring and 50% with tachycardia Decreased alertness in 14.5% whereas and cyanosis were present in only 4% of cases. In our study risk and triggering factors for exacerbation of asthma were studied in details as

shown in table 3. As shown in table 3, out of 48 patients 17(35%) patients were found to have history of allergy of agents like food, dust mite, drugs, fruits, cat hairs etc) and this finding is consistent with previous literatures. Out of 48 patients 10(20.8%) patients has seasonal Variation of exacerbation of asthma. This finding is supported by previous Studies as mentioned by Robert A et al¹⁰. In the present study out of 48 patients 5(10.4%) patients were having Family history of asthma which is inconsistent with finding of Wylie Burke et al¹¹, who stated that A family history of asthma was a significant predictor of physician diagnosed asthma in children regardless of race/ethnicity and socioeconomic status. Passive smoking As shown in table 3 out of 48 patients 4(8.3%) patients were having history of passive smoking. This finding is similar to finding by Weitzman et al. We could not found risk factors in 29.1% of asthmatic patients.

CONCLUSION

In our study of clinical profile of asthma, 29(60.4%) out of 48 asthmatic patients were male showing male predominance of asthma. In our study most common age group of presentation of asthma 13 months to 5 years (39.5%). we found asthma more common in rural patients though it may be because as our maximum patients come from rural area. Most common risk factor for asthma was found to be allergy and many of asthmatic patients were presented with tachypnoea while tachycardia was also found in many of asthmatic patients i.e. in 52% of patients.

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