

Assessment of Various Respiratory Diseases among Children: A Hospital Based Study

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ABSTRACT

Background: Respiratory infection in children is one of the major public health problems in India. Microorganisms, environmental changes, antibiotic resistance are the major risk factors in respiratory infections. The aim of this study is to assess various Respiratory Diseases among Children.

Materials and Methods: A cross sectional study was designed. Study comprised of 200 children aged above 3 years who were suffering from respiratory diseases. Children from both rural and urban area were selected.

Results: Of the 200 patients in present study 25% children presented with complaint of cough, 38% were suffering from wheezing, 9% with asthma. 62% children were allergic to allergens while 36% had and family history of allergy. 39% fathers were chronic smokers whereas 12.5% mothers were house smokers.

Conclusion: Present study concluded that care should be taken to avoid smoking habit of parents as smoking parents children are more affected to respiratory infections. Regular

monitoring and prevention can reduce the frequency of disease.

Key words: Respiratory Infection, Children, Asthma, Smoking Habit.

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Article History:

Received: 13-06-2016, **Revised:** 10-07-2016, **Accepted:** 27-07-2016

Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2016.2.4.050	

INTRODUCTION

Respiratory diseases like asthma, wheezing, upper and lower respiratory infections are very commonly observed in children. Many authors suggested that among different types of respiratory infections asthma and wheezing are frequently encountered in children.¹ acute respiratory infections and chronic obstruction pulmonary disease are the reasons behind increased morbidity and mortality throughout the world.^{2,3} based on the data available 15-30% of all under-five deaths in India are due to acute respiratory infection.³ Most of these death can be prevent with proper care and knowledge.

Various studies have emphasized upon the risk factors associated with respiratory diseases. Some of the important risks factors are viral infections, environmental tobacco smoke exposure, and atopy, have shown to have great impact on children lung function.⁴⁻⁶ Liu L. et al in the year 2012 suggested that every year 20% of total neonatal deaths in developing countries are caused by serious infections.⁷ So we aimed to evaluate and discuss various respiratory diseases among children.

MATERIALS AND METHODS

A total of 200 children were examined for the study. Children were aged above 3 years. Of the 200 samples 120 were females and 80 were males. The present study was carried out in the Department of Pediatrics, Government General Hospital, Barmer,

Rajasthan, India. Ethical committee clearance was obtained before beginning the examination. Patients were explained about the study and examinations to be performed. A written informed consent was obtained from patient's guardian before starting the procedure. All the patients were examined; a detailed case history was obtained from patients which consisted of sociodemographic data, smoking habits of parents, history of respiratory infection since birth. A self-administered questionnaire was distributed among parents and importance of answering was explained. Questionnaire consisted of questions like parent's education, parent's qualification, smoking habits, house smokers etc.

Inclusion Criteria

1. Children admitted in Pediatric ward suffering from respiratory disease.
2. Patients aged above 3 years.

Exclusion Criteria

1. Children less than 3 years of age
2. Children suffering from mental retardation

Data Analysis

Data so collected was subjected to analysis using Statistical Package for Social Sciences (SPSS) Version 15.0. Non parametric data has been represented as frequencies and percentages.

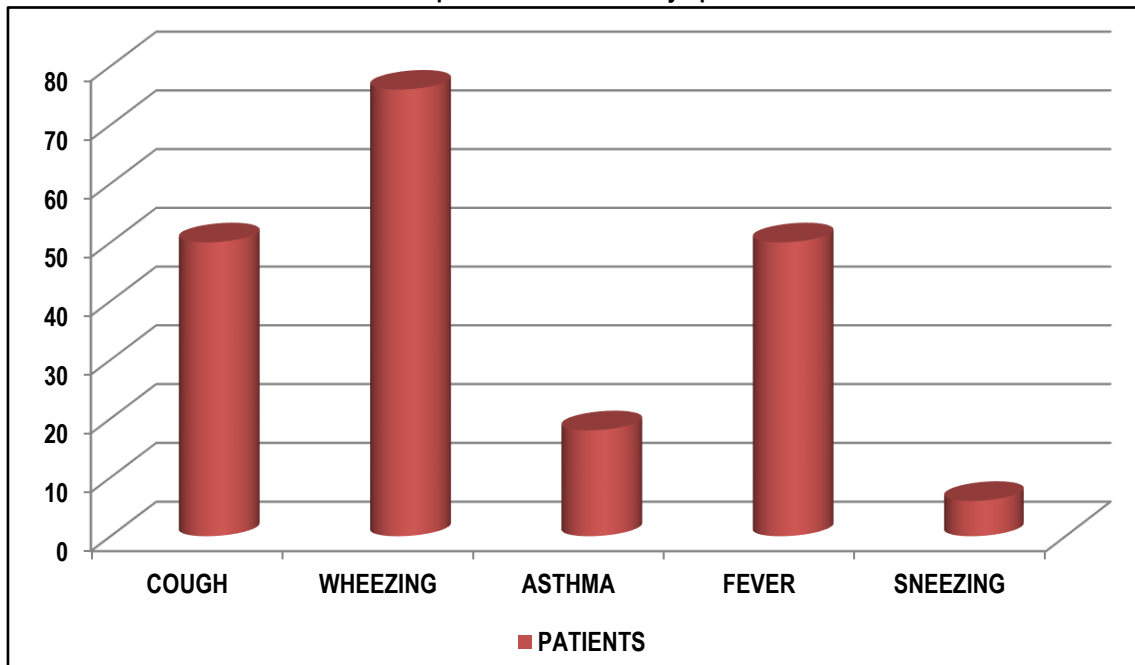
Table 1: Gender Distribution of Patients

GENDER	NO OF PATIENTS	PERCENTAGE
MALE	80	40%
FEMALE	120	60%
TOTAL	200	100%

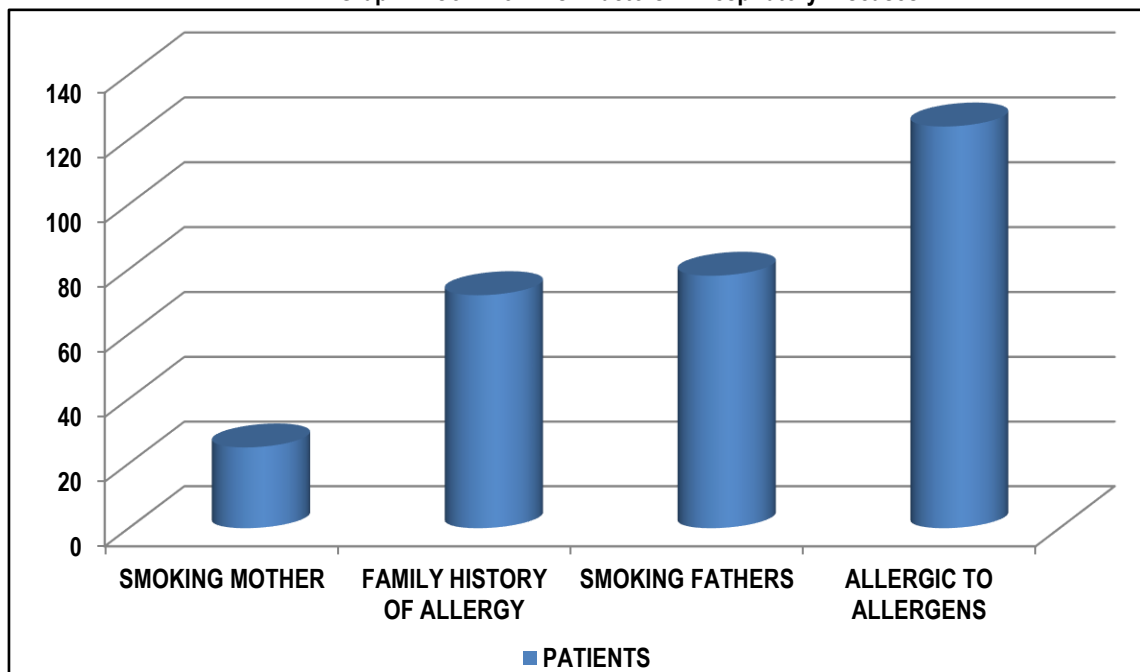
Table 2: Age Distribution Among Patients

Age	No. of cases	Percentage
3-7	82	41%
8-10	68	34%
11-13	50	25%
TOTAL	200	100%

Graph 1: Most Common Symptom



Graph 2: Common Risk Factors In Respiratory Diseases



RESULTS

Of the 200 sample selected for the study, 120 were females i.e. 60% and 80 were males i.e. 40% (Table 1). Patients selected for the study were aged more than 3 years of age. In present study out of 200 children 82 were aged between 3 to 7 years i.e. 41%, 68 children were aged between 8 to 10 years i.e. 34%, 50 children were aged between 11 to 13 years of age i.e. 25%. In present study most common age group was 5 to 7 years (Table 2).

In present study 50/200 children presented with complaint of cough i.e. 25%, 76/200 were found to be suffering from wheezing i.e. 38%, 18/200 presented with asthma i.e. 9%, 50/200 complaint of fever i.e. 25% and 6/200 complaint of sneezing i.e. 3%. Based on the observation of current study most common symptom were cough and fever (Graph 1). When questioned about the smoking habits of parents, 25/200 mothers i.e. 12.5% said they smoked regularly. 78/200 fathers were chronic smokers i.e. 39%. Smoking fathers and association with respiratory disease among children was found to be significant in our study. When asked about allergy due to allergens 124/200 i.e. 62% children were found to be allergic, which was highly significant. 72/200 children i.e. 36% had a family history of allergy (Graph 2).

DISCUSSION

Respiratory infections are one of the leading causes of death among children. Various pathogens both gram positive and gram negative have made reorganization and treatment of the infection sometimes difficult for the physicians. According to the literature available most common age group which are affected by respiratory disease is children under 5 years of age. In present study 41% were aged between 3 to 7 years.³ Respiratory infections are associated with various risk factors like parents literacy rate, suboptimal breast feeding, malnutrition, cooking fuel, smoking habit among parents, family history of allergy etc.^{8,9}

In present study 12.5% present mothers were house smokers and mostly smoked in bedroom. 39% fathers were regular smokers. Goel et al in their study reported that prevalence of ARI is more in children whose parents have history of smoking.¹⁰ Our results are in agreement with the author. Nafstad P et al suggested that children of mothers who were using smoky chullahs were more prone to respiratory disease.¹¹ However no such relation was studied in current study. In present study 36% children had a family history of respiratory disease and 62% were allergic to allergens like pollen, cold etc. Based on results of our study family history of RI and allergy to allergens were associated with increased risk of respiratory infection disease like wheezing, asthma etc. similar findings were observed by other authors.¹²

Various studies have shown a strong association between nutritional status, parent's education, lifestyle and respiratory diseases.¹³ In present study literacy rate of parents were found to be moderate. The most common symptom observed in present study was wheezing reported by 38% patients, which is similar to those reported by other authors.¹

CONCLUSION

The present study should smoking habits of parents have a great impact on children and is of the major cause of respiratory disease. Father history of respiratory disease makes children more prone to infection. Care should be taken to rule out family

history and proper prevention should be taken. Wheezing was found to be the most common symptom among patients.

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Source of Support: Nil. **Conflict of Interest:** None Declared.

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Cite this article as: Harish Kumar. Assessment of Various Respiratory Diseases among Children: A Hospital Based Study. *Int J Med Res Prof*. 2016; 2(4):204-06.