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## Knowledge of Bronchial Asthma in Parents/Caregivers of Adolescent Asthma Patients.

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### ABSTRACT

Asthma being one of the most common respiratory disorder among children should be controlled in early childhood to prevent its long term complication. A number of misconceptions and wrong practices lead to poor compliance with the treatment thus causing uncontrolled disease and increasing the morbidity and mortality among the pediatric population. The present study was aimed to assess the knowledge of asthma and various misconception in parents of asthma patients. It was a questionnaire based study and each subject was interviewed personally. No leading question was given to the subjects. Of all subjects 37% of parents believed that the disease is not controllable, 51% of them believed that their children will not be able to take part in sports, almost half of them believes that tablets are a better than inhalers for treatment. 2% of the parent believed that the disease is contagious, 60% of them do not know about the chronic nature of disease. Most of the parents are not aware about the correct technique of taking DPI/PMDI. It was concluded that a number of misconceptions and wrong practices regarding use of inhalers are prevalent and thus various educational programs on the management of asthma needs to be organized.

**Keywords:** asthma, PMDI, DPI, spirometry, peak flow meter.

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## INTRODUCTION

Bronchial asthma is one the most common diseases of childhood. Asthma is a chronic inflammatory disorder of the airways in which many cells & cellular element play a role. The chronic inflammation is associated with airway hyper responsiveness that leads to recurrent episodes of wheezing, breathlessness, chest tightness & coughing particularly at night or in early morning. These episodes are usually associated with widespread, but variable airflow obstruction within the lung that is often reversible either spontaneously or after treatment [1].

Asthma has a hereditary basis but environment factors have also been implicated in its pathogenesis

In India, rough estimates indicate a prevalence of between 3.7% and 4.5% in 6-7 & 13-14 year old children [3]. Between 100 and 150 million people around the globe suffer from asthma [2]. India has an estimated 15-20 million asthmatics. World-wide, deaths from this condition have reached over 180,000 annually [2].

Treatment of asthma by inhalation devices is in practice since many years. MDIs are often preferred inhalation devices. Combined with a spacer device it is more convenient especially in children and elderly people. The purpose of the spacer device is to act as an intermediary chamber into which the MDI can discharge the drug allowing inhaling over several breaths. A secondary advantage of using spacers with inhaled- corticosteroid is the incidence of local side effects, such as oropharyngeal candidiasis and hoarseness, is reduced [4].

In order to achieve asthma control it is essential that children receive appropriate education and training pertaining to the management of their disease and most importantly, are prescribed the correct inhalation device to ensure that medication is deposited in their lungs [4].

Many asthma-affected children and their parents are not familiar with appropriate techniques for inhaler use. This may result in misuse, overdose, or diminished response of the administered therapeutic drugs, or may even result in unnecessary, repeated hospitalization [4].

A study by Khassawneh et al [4] concluded that more than half of the subjects were not able to perform all the steps of using the inhaler, only 30% could reach the total possible scores of nine [5].

Uncontrolled asthma was associated with low maternal education and parental concerns about adverse effects of medication. Numerous studies have identified sub-optimal inhaler technique as a common problem in patients with respiratory disease [6-7].

A number of misconceptions and myths about the inhalation therapy prevail in India, like use of inhaler is dangerous; it damages lungs and heart, it is the last resort, costly, and habit forming; one's ailment is exposed to all and it is difficult to use etc. These may affect the treatment seeking behavior and compliance [8]. In one of the studies only 17.4% asthmatic children who received inhalation therapy revealed good compliance with their medication regimens. No child demonstrated the correct 9 technique of using inhaler [9].

### Aims and Objective

- To assess the knowledge of asthma in parents/caregivers of asthma patients.

### METHODS AND MATERIALS

- An interview based prospective cohort study with a sample size of 100.
- Screening of parents was done with questionnaire.
- Questionnaire contained questions dealing with educational qualification & knowledge about asthma.
- Interview was conducted separately & no leading questions were asked till end of interview.

**Inclusion Criteria**

- Parents of patients diagnosed with asthma for Minimum duration of 1 yr.
- Age of patient between 9-18 yrs.

**METHODOLOGY**

It was an interview based prospective cohort, study with a sample size of 100 to access knowledge among parents. Screening of parents was done with questionnaire.

Questionnaire contains 27 questions dealing with educational qualification, socio economic status & knowledge about asthma.

The interview was conducted separately & no leading questions till the end of interview. All answers given were noted & data was entered in master chart.

**OBSERVATION**

- Total no of subjects: 100
- Following results are obtained after analysing the data:

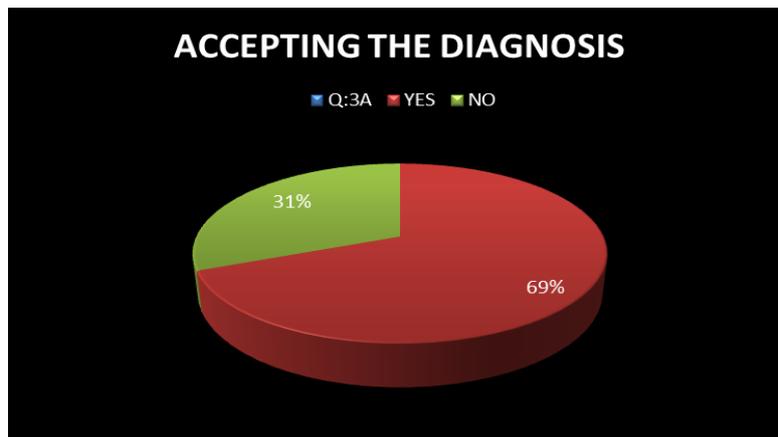


Figure 1: Acceptance of diagnosis among subjects

- Accepting the diagnosis: 69%
- Not accepting the diagnosis: 31%
- The obtained result is very significant with Z score of 62.2 which signifies that a significant group of subjects are not accepting the diagnosis after proper counselling.

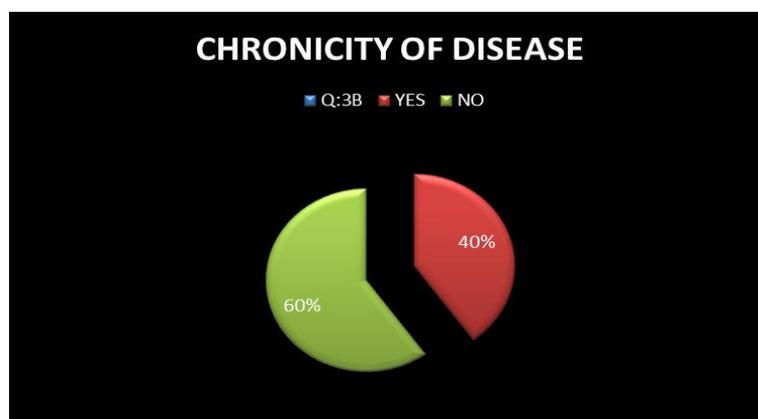


Figure 2: Knowledge about chronicity of disease

- Subject who do not know chronic nature of disease: 60%
- Subject who know chronic nature of disease: 40%
- The obtained result is very significant with a Z score of 27.7 suggesting there are a lot of subject who do not know about the chronic nature of asthma.

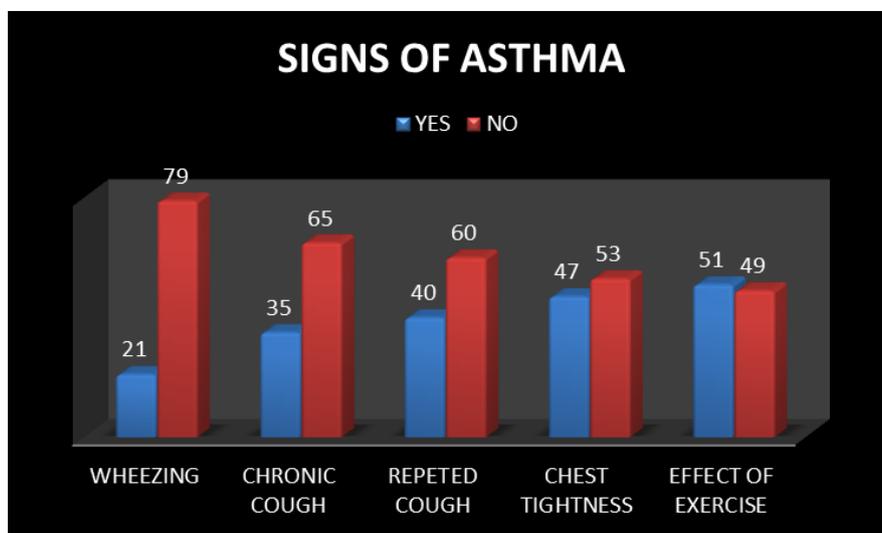


Figure 3: Knowledge about signs of asthma

The result obtained from the above graph suggests that there are a lot of subjects who do not aware about different signs of asthma. The result thus obtained is statistically significant with p value of 0.00012.

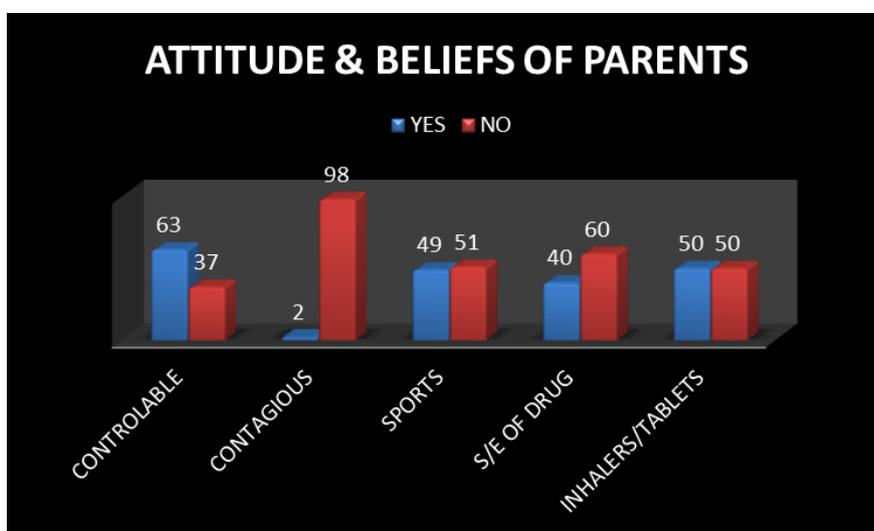


Figure 4: Attitude & beliefs of parents

Result thus obtained shows that there are a lot of subjects who have a lot of misconceptions and beliefs about asthma. The obtained values are highly significant with a p value of 0.0001

### RESULTS

The result obtained after analysing the data shows that there is significant lack of knowledge about asthma among parents of children suffering from asthma which also correlates with their educational qualification.



## DISCUSSION

Asthma is a form of obstructive airway disease the symptoms of which can be avoided and controlled if a person is complying with its medication by taking them regularly and in the prescribed doses and also monitoring his/her daily peak flow variability. However the disease is often associated with high morbidity and mortality the main reason for which is not taking medications properly and in prescribed doses.

In our study we found that there are a significant group of parents who even after proper counselling are not willing to accept the diagnosis of asthma. Some of them i.e. 2% also believes that the disease is contagious in nature. Of all subjects only 40% knew about the chronic nature of disease.

After looking on the response about signs of asthma almost 50% correctly identified chest tightness and exercise limitation as signs of asthma, whereas a majority among them are not able to identify wheezing repeated cough and or chronic cough as sign of asthma. A large number of parents were concerned about the side effects of drugs like it may affect the growth of their child, some even thinks that the drugs are habit forming and once started their child will never be able to control his/her symptoms without the help of medication.

Almost 50% of parents believed that tablets are much safer and are much better way to control disease as compared to inhalers. Parents were also worried that their child will not be able to participate in outdoor games.

Limitation of my study is its small sample size, and the results would have been better reflected in a larger population. Also with a large sample size effects of level of education and socioeconomic status on asthma control can be drawn.

## CONCLUSION

- It is very important for every physician to explain about the disease of adolescent to the parents so that the problems arising due to lack of knowledge can be managed.
- The parents should be explained about the proper technique for using inhalers, spacers etc.
- A satisfactory level of parental knowledge affects the effectiveness of asthma treatment in a child, as a significant element of exacerbation & complication.

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