



ORIGINAL ARTICLE

Parental Knowledge, Attitude and the Practices Regarding Management of Childhood Bronchial Asthma

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Abstract

Background: Asthma is one of childhood's most common chronic respiratory diseases and an important global health issue. Parents who are the primary caregiver play an important in the management of the disease. Poor parental knowledge and attitudes often contribute to inappropriate management practices, leading to a lack in the care process. **Aim and Objectives:** To study parental knowledge, attitude, and the practices regarding management of childhood bronchial asthma by using a pre-structured questionnaire. **Material and Methods:** This cross-sectional study was conducted for a period of 6 months in paediatrics department of ASCOMS and hospital using a pre-structured questionnaire. A total of 200 parents were interviewed and the data collected was analysed and expressed in terms of percentages and proportions. **Results:** This study showed that the majority of parents who brought their children to the doctor were from urban areas, with doctors being their primary source of information about the illness. The present study shows that only 32% of parents had correct knowledge regarding the aetiology of bronchial asthma. About 45% of parents thought cold to be the precipitating factor of asthma while 43% thought that consuming specific food items was the triggering factor whereas only 11% had knowledge about a change of seasons being the main precipitating factor. Only 21% of parents were found to have a positive attitude towards inhalational therapy whereas the majority of parents didn't want their kid to be labeled with a diagnosis of bronchial asthma. Only 9% of parents agreed that they reported to the doctor within 6 hours of the onset of the clinical features and the majority (67%) of parents consulted the doctor because of the persistent cough in the child. **Conclusion:** The parent's knowledge about bronchial asthma was poor. Parents have inadequate knowledge, and an average attitude, and apply incorrect practices regarding various aspects of childhood bronchial asthma. This gap between the recommended and actual practice may be related to the inadequate knowledge of parents. Therefore, improving knowledge and attitudes may encourage better practices among parents of children with asthma which can be achieved through health education.

Keywords

Asthma, Cough, Knowledge

Introduction

Bronchial asthma is a major public health problem. In India, the estimated burden of asthma is believed to be more than 15 million. In the last 2 decades, there has been a constant increase in asthma prevalence worldwide. In asthma, there is a widespread narrowing of the airways which further causes paroxysmal

dyspnoea, wheezing, or cough.^[1] It is a syndrome characterized by airway obstruction. It causes recurrent episodes of wheezing, breathlessness, chest tightness, and cough particularly at night and/or early in the morning.^[2-4] Asthma is a significant cause of school/work absence, health care expenditure is very high and morbidity and

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mortality are rising. It should also be taken into account that there is a treatment gap for asthma because patients typically report late and are not detected because they don't seek medical advice, a health facility may not be available, or they may be misdiagnosed as having LRTI. As a result, it is crucial to evaluate the knowledge, attitude, and practices of the caregivers of these kids in order to overcome the challenges and give the kids with this illness the care they need. A wide gap exists between recommended and actual practice, due to issues such as educational barriers and a lack of adequate asthma-related knowledge.^[5] Also, asthma is becoming increasingly prevalent among children in India. The parents of children with asthma are harbouring considerable misperceptions about the disease. The parents are having misperceptions about asthma aetiology, triggers, and treatment modalities including inhaled therapy and corticosteroids. Poor parental knowledge and attitudes often contribute to inappropriate management practices, leading to a lack in the care process. Latest childhood asthma guidelines emphasize parent training to improve their asthma-related knowledge, attitudes, and practices (KAP) and it should be included in routine clinical care. Asthma-related knowledge includes an understanding of the pathology of asthma and the various medications used in treatment and prevention. Whereas a good attitude is shown by positive relationships with physicians and the frequency of visit to paediatrician. And lastly, good practices refer to the timely intervention for active management with a positive approach.^[6] With this in mind, we conducted a study of parental knowledge, attitudes, and practices on the management of paediatric bronchial asthma where we aimed to document the knowledge, attitudes, and practices (KAP) of parents of children with asthma and thus analyze how knowledge and attitudes relate to practices.

Material and Methods

This study was conducted in the Department of Paediatrics in Acharya Shri Chander College of Medical Sciences and Hospital after getting approval from the institutional ethical committee with reference no. ASCOMS/IEC/RP&T/2020/416A dated 24.10.2020.

This cross-sectional was conducted for a period of 6 months from Nov 2020 to May 2021 using a pre-structured questionnaire based on the methodology of KAP studies conducted in other states of India. The prime investigator interviewed the parents of children who had bronchial asthma and attended the paediatrics department during these 6 months. Parents of 200 patients (120 males and 80 females) with a clinical diagnosis of childhood asthma were considered for the study after using inclusion and exclusion criteria.

Parents of children attending the paediatric Outpatient department having been diagnosed with bronchial asthma.

Data collected was analyzed and expressed in terms of percentages and proportions.

Results

Table 1 displays the age and gender distribution of children whose parents participated in the study. We may conclude from the data that age doesn't significantly alter the distribution pattern of the disease because the overall number of children affected in the various age groups is around the same.

When the demographics were examined, it was discovered that 36% of families came from rural areas, while 64% of families lived in urban areas.

KNOWLEDGE REGARDING BRONCHIAL ASTHMA

The parents were questioned on where they first learned about bronchial asthma. According to *Table 2*, roughly 35% of people learned about bronchial asthma through their doctors, whereas 20% learned about it from friends or family, 18% from publications, 12% from electronic media, and about 15% had no knowledge at all.

The parents were asked what they believed to be the etiological factor causing their child's bronchial asthma. About 32% of parents thought it was genetic, 26% thought it was communicable, and the remaining 42% thought there was no known cause. The details are given in *Table 3*.

Through the questionnaire, the parents were also asked about the frequent precipitating or triggering factors, and the majority of them gave more than one explanation. According to 45% of parents, Exposure to cold was the

Table 1 Age and gender-wise distribution of the children whose parents were selected for the study.

Age (in years)	Male		Female		Total
	Urban	Rural	Urban	Rural	
0-4		38	20		58
4-8		29	27		56
8-12		29	21		50
12-16		24	22		46
Total		120	80		200

Table 2 Source of information for the parents about bronchial asthma.

Source	No. of parents
Doctors	70 (35%)
Friends/Relatives	40 (20%)
Magazines	36 (18%)
Electronic Media	24 (12%)
No Knowledge	30 (15%)
Total	200

Table 4 Common precipitating/triggering factors attributed to the causation of asthma as believed by parents

Common precipitating/Triggering factor	Percentage
Exposure to cold	45%
Certain foods (curd, hot/cold)	43%
Pets	25%
Insects	18%
Perfumes/Paints	15%
Dust/Smoke	12%
Stress/Exercise	12%
Change of season	11%

most typical precipitating factor, followed by consumption of particular meals (curd, hot, or cold) as believed by 43% of parents. As shown in Table 4, other triggering factors as presumed by parents included pets, insects, perfumes/paints, dust/smoke, stress/exercise, and change of season to the belief and knowledge of 25%, 18%, 15%, 12%, 12%, and 11% of parents respectively.

ATTITUDE REGARDING BRONCHIAL ASTHMA=

The use of inhalation therapy was resisted by many parents, and when their attitudes toward it were evaluated, 21% (42 parents) were found to have a positive attitude, while 47% (94 parents) had a stigma attached to it and the remaining 32% (64 parents) had a no positive attitude, as shown in Table 5.

They were questioned about why they don't want to use inhalation therapy after being asked about their attitude.

Table 3 Etiological cause of bronchial asthma in children as conceived by the parents.

Aetiology	No. of individuals
Hereditary	64 (32%)
Contagious	52 (26%)
No identifiable cause	84 (42%)
Total	200

Table 5 Attitude of parents regarding inhaled therapy.

Attitude	Percentage
Positive	21%
Stigma	47%
No positive	32%

About 34% of parents didn't want to label their kid with a diagnosis of bronchial asthma. Table No. 6 lists other justifications for not employing inhalation treatment.

PRACTICE REGARDING BRONCHIAL ASTHMA

Approximately 55% of parents reported to the doctor within 36 hours of the appearance of the signs, 36% within 24 hours, and only 9% reported to the doctor within 6 hours of the onset of the clinical features when asked about the timing of medical consultation with the doctor after the clinical features were seen, as shown in Table 7.

The parents were questioned regarding the clinical characteristics that compelled them to see a doctor. The most prevalent clinical feature was a persistent cough (67%) with loud wheezing (49%) and rapid breathing (45%) rounding out the list of symptoms. Other symptoms mentioned by parents seeking consultations are intercostal/subcostal recessions (43%) and altered sensorium (23%), as indicated in Table 8.

Discussion

Bronchial asthma is one of the major problems in childhood

Table 6 Reasons for not using inhalation therapy.

Reason	Percentage
Don't like public labeling as asthmatic	34%
Fear of addiction	31%
Feel pumps reserved for serious or severe attacks or will fail to act	24%
A misconception that it is costly	24%
Prefer oral medications	21%
Had not been told by the doctor due to a lack of knowledge and time	19%

Table 7 Time taken to consult the doctor after the onset of clinical features.

Time taken	No. of parents
0-6 hrs	18 (09%)
6-24 hrs	72 (36%)
24-36 hrs	110 (55%)
Total	200

problems. The social implications associated with bronchial asthma and its impact on the quality of life of a child is enormous.

In this study, we saw that 35% of people first learned about bronchial asthma through their doctors, whereas 12% learned from electronic media. A similar study was done by Bhagavatheeswaran K.S. *et al.* ¹⁷¹ which also showed the doctors and hospital staff to be the first and only source of information regarding bronchial asthma for parents of children with bronchial asthma in 49% of cases. Another study by Gehan A ¹⁸¹ shows that electronic media was the primary source of information for parents. In the present study, we analyzed that 32% of parents have knowledge about bronchial asthma having a hereditary predisposition. A study done by Rifaat N ¹⁹¹ showed 25% having knowledge of hereditary predisposition in asthma whereas taking about global data, another study done in Pakistan by Irfan O ¹⁰¹, showed that only 19% of parents knew about the genetic predisposition of asthma.

21% of parents were found to have a positive attitude regarding inhaled therapy for asthma in our present study. Similar results were shown in a study conducted by Marsden E.J. ¹¹¹¹ which showed that 23.5% of parents had a positive attitude towards the inhalational therapy. Another study done by Hamdan, A.J ¹¹²¹ showed 34% of parents with positive attitudes whereas the majority of

Table 8 Clinical features that forced the parents to consult a doctor.

Clinical feature	Percentage
Persistent cough	67%
Audible wheeze	49%
Fast breathing	45%
Intercostal/Subcostal recessions	43%
Altered sensorium	23%

parents or guardians had a negative attitude towards the therapy.

This study also shows that 47% of parents had a stigma associated with the treatment of asthma along with the inhalational therapy which was in similarity to another study done by Yang C.L ¹¹³¹ which showed 55% of parents having the stigma regarding therapy.

34% of parents didn't want their kids to be labeled as asthmatic in the present study. Globally also such attitude was acknowledged in a study by Golebski K ¹¹⁴¹ which showed 39% of parents having the stigma of their child being considered asthmatic.

This study shows 24% of parents that feel pumps are reserved for serious or severe attacks. A similar result was shown in a study done by Stéphanie L ¹¹⁵¹ which showed that 66% of parents feel that the pump is not to be used in a mild case. Chan *et al* ¹¹⁶¹ reported that 66% of the parents were concerned about the side effects of asthma medications (91%), inhaler dependency (86%), cost of the inhaler (34%), and difficulty of its use (15%) The present study shows that only 9% of parents reported to the doctor within the first 6 hours of the onset of the clinical features in their child. Another study done by Sinha I.P ¹¹⁷¹ showed that 15% of parents only rushed to the hospital within the first 6 hours while others gave the child treatment as suggested by the doctor and then waited for symptoms to subside. But a study by Fuhlbrigge A.L



^{118]} showed that the majority of parents were apprehensive and 56% of them said that they visited the doctor within 1st 6 hours of symptoms itself. Similarly, a study done by Li, J ^{119]} also showed 67% of parents followed the practice of rushing to the hospital during the initial 6 hours of symptom development in the child.

Conclusion

In this study, we came to the conclusion that parents lack adequate information, have a poor attitude, and don't follow the right practices when it comes to many aspects of bronchial asthma. This gap between the recommended and actual practice may be related to inadequate knowledge of parents and thus the necessity of the hour is creating more and more awareness of childhood asthma and inhalation therapy. The management of this illness can benefit greatly from health education. To improve asthma care and compliance among children it is necessary to provide adequate education to parents.

We need to organize awareness sessions for the parents whose children are diagnosed with bronchial asthma and make them understand the various concepts related to time management and help them to get over the stigma of their child being labeled as asthmatic.

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Conflicts of Interest

There are no conflicts of interest.

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