

# LACK OF RECOGNITION OF ASTHMA IN PAEDIATRIC PRACTISE

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## SUMMARY

To determine how frequently the health care workers recognise recurrent wheezing in childhood as asthma and is asthma treated appropriately. A hospital based prospective review of 100 children with asthma was performed. 38 were correctly recognised in the past. Hospital doctors recognise asthma relatively more frequent 34/38 (69%) than doctors in general practise 4/38 (8%). Out of 38 previously recognised cases 17 received adequate treatment.

## INTRODUCTION

Asthma in childhood is a common condition, its prevalence has increased over the past twenty years in Europe and USA<sup>1,2</sup>. It is recognised as a common cause of recurrent wheezing in childhood and terms like wheezy bronchitis and chronic bronchitis are now obsolete<sup>3</sup>. These terms are still used and worst is the label of recurrent chest infections worms infestation for apparent cases of asthma. Appropriate label of asthma leads to better understanding of the disorder and proper management. In general practice asthma is under-diagnosed and under-treated in children.

## MATERIAL AND METHODS

100 consecutive cases of asthma attending paediatric OPD or admitted in hospital from July 1992 to Feb, 1993 were enrolled in the study. A standard proforma was filled along with a chest X-ray and Mantoux test in every case of a recurrent cough or wheeze. Those with a doubtful history or abnormalities on chest X-ray or MT reading of >5mm were excluded from the study. The diagnosis of asthma was based on recurrent cough or wheeze, relieved by nebulised or oral salbutamol.

The data was analysed for a) the frequency of asthma recognition in the past, b) the adequacy of asthma treatment and c) parental understanding of the disorder. Additionally various other clinical parameters of asthma were also recorded.

For the purpose of this study the following definitions were used. Asthma recognition was inferred from verbal information by parent or hand held record. Adequacy of treatment was judged by control of symptoms or any record of appropriate asthma therapy. Parental understanding was considered a) good :knowledge of asthma as an allergic disorder and use of bronchodilator rather than cough suppressant b) fair: simply naming the problem, c) poor: none of the above.

## RESULTS

71 children with asthma were hospitalised and 29 children were treated in out patients. Out of 100 cases of asthma 49 children had been seen by a hospital doctor before and 51 were only seen in general practice. The frequency of asthma diagnosis by hospital doctor was 69.4% (34/49) as compared to general practitioner 7.5% (4/51). Overall recognition of asthma was 38% (38/100) Table-I.

TABLE – I  
DIAGNOSIS OF ASTHMA

Previous visit	Correct diagnosis	Undiagnosed
OPD	18	8
Hospitalised	16	7
GP	4	47
Total	38	62

Table-II shows a sharp contrast in asthma diagnosis beyond infancy, 47.6% (1-4 years) and 38.6% (4-12 years) and significantly low 7.1% in under 1 year. Although wheezing is common in infancy, most of the first wheezing episodes can not be labelled as asthma because of the requirement of recurrence for asthma diagnosis. Besides bronchiolitis, inhaled foreign body, gastroesophageal reflux and congenital abnormalities need to be excluded.

Only 17 out 38 diagnosed cases received adequate treatment (44.7%). If one takes into account the total number of cases then upto 83% of children in the study group remained undertreated Table-III.

No mother could measure upto category good for parental understanding and the corresponding number for categories 'fair' and 'poor' was 11 and 27 respectively Table-IV.

TABLE – II  
AGE DISTRIBUTION AND THE FREQUENCY OF PRIOR RECOGNITION

Age	Number	Previous diagnosis	Frequency
6 to 12 months	14	1	7.1%
1 to 4 years	42	20	47.6%
4 to 12 years	44	17	38.6%

TABLE – III  
ADEQUACY OF TREATMENT

Treatment	Number
Adequate	17
In Adequate	21

The salient clinical features of asthma are tabulated in Table-V. As expected nocturnal cough was the most frequent symptom (62%) and both day and night combined (27%). 11% could not commit to either but did give history of cough.

Wheeze was absent in 5 cases, which is in accordance with the current concept of asthma being diagnosable on the basis of recurrent cough alone.

The most common trigger identified was URTI or exposure to cold 15.9%. It was not known in 32% which may be attributed to poor parental understanding or perhaps related to house dustmite allergy. The latter is difficult to identify on history alone and requires specific IgE measurement or skin testing. Food alone was implicated in 11 cases only but in combination it was almost a universal feature. Interestingly banana, rice and yoghurt were the common offenders described among the associated atopic disorders rhinitis was seen in 40% and eczema 8%.

Family history of asthma was present in 67% and absent in 28% Table-VI. We believe that there is a real chance of missed family history due to poor recognition of asthma in relatives. Moreover one of the

TABLE-IV  
PARENTAL UNDERSTANDING

Parental Understanding	Number
Good	0
Fair	11
Poor	27

TABLE - V  
SALIENT CLINICAL FEATURES

Clinical Feature	Number
<b>COUGH</b>	
At Night	62
Day Time	6
No Variation	21
Not Known	11
<b>WHEEZE</b>	
Present	95
Absent	5
<b>TRIGGER</b>	
Cold/URTI	59
Exercise	20
Food	11
Not Known	32
<b>ATOPY</b>	
Rhinitis	40
Eczema	8
Hay fever	2
Croup	3
Absent	37
Not Known	12

parents having had asthma in childhood could easily have gone unrecognised.

The frequency of asthma diagnosis is shown in Table 1.

## DISCUSSION

Asthma is a common childhood condition worldwide. Its prevalence varies from

TABLE - VI  
FAMILY HISTORY

FAMILY HISTORY	
Present	67
sibs 45	
parents 6	
second degree 16	
Absent	28
Not Known	5

place to place being 11% in UK and 2% in India<sup>4</sup> (Fig I). The increased prevalence in the developed countries is partly attributed to increased recognition of asthma as a diagnostic label for recurrent wheeze in children<sup>5</sup>. Asthma was infrequently recognised by parents and general practitioners in UK 15 to 20 years ago<sup>6,7</sup>. There has been no large community based study in the subcontinent, to our knowledge, on the prevalence of asthma. We feel that the low prevalence rates reported from this region may, in due part, be related to lack of recognition of asthma among health care workers. The results from this small sample show that the recognition of asthma by G.Ps was 4/51 (7.8%) and by hospital doctors was 34/49 (69.4%). The difference is explained by better information of the latter and more severe cases seen in hospital. But despite it a third of moderately severe cases are still missed in hospital practise.

Asthma recognition was low in the first year 1/14 (7.1%) as compared to older children 1 to 4 years 20/42 (47.6%) and 4 to 12 years 17/44 (38.6%). This reflects the difficulty in diagnosing asthma in infancy because of overlap of symptomatology due

PREVALENCE OF CHILDHOOD ASTHMA THROUGHOUT THE WORLD

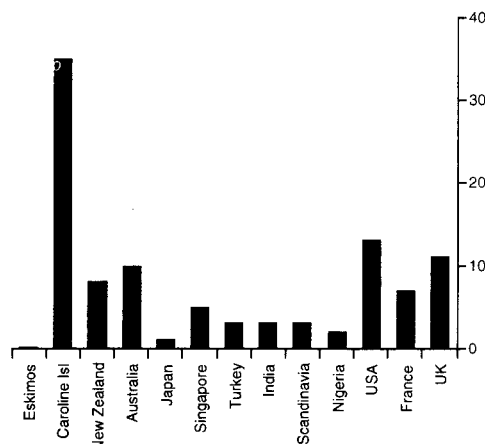


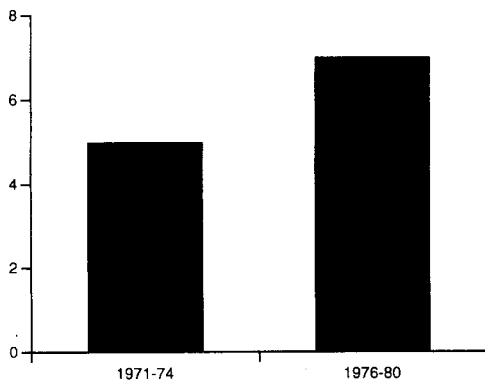
Fig. 1

to bronchiolitis and the fact that prevalence of asthma increases significantly with age, being 75% in children under 1 year and 15.9% in children over 4 years

Under recognised and undertreated asthma has a significant impact on the life of the child and the family<sup>9</sup>. It may also lead to a fatal outcome<sup>10</sup> (Fig 2). We had two deaths (ages 3 and 4 years) from acute severe asthma, during the study period, which had previously remained unrecognised. In the current management of asthma inhaled bronchodilators are preferred over oral preparations because they are delivered directly into the bronchial tree, are highly effective, have a rapid onset of action and low toxicity<sup>11</sup>. We had 44 children ages 4 to 12 years with asthma, yet none had received inhaled therapy. There appears to be a reluctance on their use not only by general public but also among doctors. Another significant advance in asthma management is early intervention with oral steroid to shorten the duration of attack and avoid the need for hospitalisation<sup>12,13,14</sup>

None of the 18 children seen in hospital OPD previously, in this study, were given oral steroids and only 6 out of 16 cases hospitalised received steroids. Like any

DATA FROM THE NATIONAL CENTRE FOR HEALTH CARE STATISTICS, USA



Prevalence of childhood asthma (6-11 yrs)

Fig. 2

other chronic illness in childhood asthma cannot be managed properly without parental understanding and cooperation.<sup>15</sup> None of the mothers of the diagnosed cases of asthma had any knowledge of its allergic basis or familiarity with oral bronchodilators for relief of symptoms. Although in 17 out of 38 cases they knew the diagnosis of asthma but nothing else about it. We conclude that asthma remains an under recognised and an under treated condition. There is a need for increasing asthma awareness and disseminating current knowledge among health care workers.

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