

## Impact of bronchial asthma on life styles in children with bronchial asthma in a tertiary care unit.

Nirubaa Umashankar<sup>1</sup>

<sup>1</sup>Department of Paediatrics, Faculty of Medicine, Jaffna

### Abstract:

**Background:** Bronchial asthma is a chronic respiratory illness affecting children. It has significant impact on childhood activities and it is a major contributor towards school absenteeism

**Objective:** To evaluate the impact of bronchial asthma on life styles in bronchial asthmatic children from a tertiary care unit, Jaffna, Sri Lanka.

**Method:** A prospective cross sectional descriptive study was conducted in professorial paediatric respiratory clinic at Teaching Hospital Jaffna. All the children who were diagnosed as Bronchial Asthma and on inhaled corticosteroids for more than three months were recruited into the study. The data was collected by interviewer administered questionnaire.

**Results:** Sixty children were studied during the period. The mean age of the study population is  $6.8 \pm 3.2$  years. Among the study population 55% (n=33) were females and 45% (n=27) were males. The mean duration of steroid usage in the study population was  $15.5 \pm 1.5$  months. Exercise induced asthma was seen in 27% (N=16). Sixty five percent (n=39) had good asthma control and 90% had no school absenteeism during the last 3 months. 62% of study population restricted ice cream and chilled foods irrespective of symptoms and 38% restricted bathing. Restriction of life style was initiated by the parents in 95% of the time and in 5% of children ice cream was restricted by medical practitioner.

**Conclusions:** Life style restrictions in children were imposed mainly by parents despite having a good control of asthma.

(Key words: Bronchial asthma, Life style restriction,)

### Introduction:

Bronchial asthma is one of the major chronic respiratory illness affecting children worldwide and the situation is same in Sri Lanka too.

Bronchial asthma has significant impact on childhood activities such as schooling, dietary practices and play activities in addition to the financial burden on the family. It is a major contributor towards school absenteeism in children (1)

Even though there were several studies published regarding bronchial asthma in children, there is little data available on the impact of disease on child's life styles.

In our clinical practice it is an observation that parents impose restrictions on bathing, food habit and outdoor play activities in children with bronchial asthma. Lifestyle restriction in childhood asthma has also been reported from other parts of the world too. (1-4). The main objective of this study was to evaluate the impact of bronchial asthma on life styles in bronchial asthmatic children and to analyse the relationship between severity of asthma and life style restriction.

### Method

A prospective cross sectional descriptive institution based study was conducted at the Paediatric Respiratory Clinic of the Professorial Unit Teaching Hospital Jaffna. All the children who were diagnosed as Bronchial Asthma and on inhaled corticosteroids for more than 3 months duration attending the Pediatric Respiratory Clinic at Professorial Unit Teaching Hospital Jaffna were recruited for the study. Children suffering from other chronic illness were excluded from the study. The study was conducted from April 2015 to March 2016. Data was collected by using structured interviewer administered questionnaire from each study unit and informed written consent was obtained from the care giver before collecting the data.

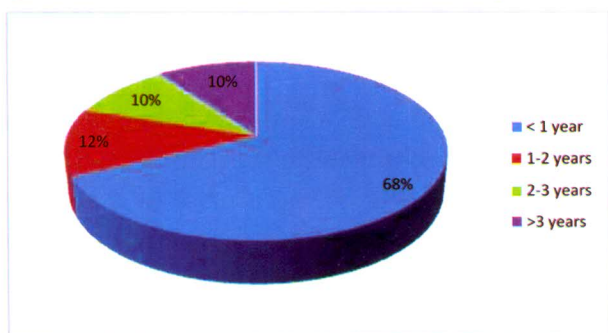
### Results

60 children were included in the study. In which twenty seven percentages (27%) were in the age

group of 2-5 years and 70% are between 5-12 years. The mean age of the study population was  $6.8 \pm 3.2$ . Females represent 55% and the males were 45%. Only 27% of the study population had exercise induced asthma.

The mean duration of steroid use is  $15.5 \pm 1.5$  months. Figure 1 shows the duration of inhaled steroid usage in the study population.

Figure 1. Duration of inhaled steroid usage



Sixty five to sixty eight percentages of children had well controlled asthma and nearly 5-10% had very poorly controlled asthma. Table 1 demonstrates the Asthma control for the previous 3 months.

Table 1 Asthma control in the previous 3 months.

Month before the study	Well controlled	Poorly controlled	Very poorly controlled
Last month	68%	27%	5%
Previous months	68%	22%	10%
Month before previous months	65%	28%	7%

Thirty seven percentages (37%) had no acute exacerbations during the past 3 months and 8% had more than 3 acute exacerbations during that period. Among those who had acute exacerbation fifty eight percentages (58%) did not need any hospital admission for acute exacerbation. Nearly 10% needed more than four hospital admissions for acute exacerbation during the past 3 months. When analyzing the school absentism, ninety percentages (90%) of the study population had no school absentism during the previous 3 months period. This indicates a good control of asthma in the study population.

When analyzing the restriction of food items, 62% (n=37) of mothers restrict ice cream to their

children with bronchial asthma. Of which 22% (n=13) restricted despite remaining symptom free and having a good control. Restriction of life style was initiated by the parents in 95% of the time and in 5% of children ice cream was restricted by medical practitioner.

Restriction of chilled food items is noted in 60% (n=36) of the study population. Restriction of other food items like milk, banana and crabs were less common and that accounted for 33%, 38% and 43% of the study population respectively. There was no restriction of egg in the study population.

Outdoor play activities were restricted in 14 children (23%), out of which only 6 children (43%) had exercise induced asthma. Competitive sports and visiting crowded places were restricted in 18% of the study population. Bathing was restricted by their parents in 38% of the study population and 48% of them were restricted from bathing during an acute exacerbation.

Analysis of the data shows that there is no significant correlation of restriction of ice cream with the severity of asthma control. ( $p = 0.68$ ) This is same for other chilled foods too. Even though restrictions of other food items are less commonly practiced, there is no correlation of restriction of food items with asthma severity. (Crab  $p=0.32$ ). There is no significant correlation between asthma control & restriction of play activities ( $p = 0.3$ ). This is same for competitive sports & crowded places too. ( $p$  is 0.07 & 0.7). There is no correlation between exercise induced asthma & restriction of play activities ( $p=0.1$ ).

### Discussion:

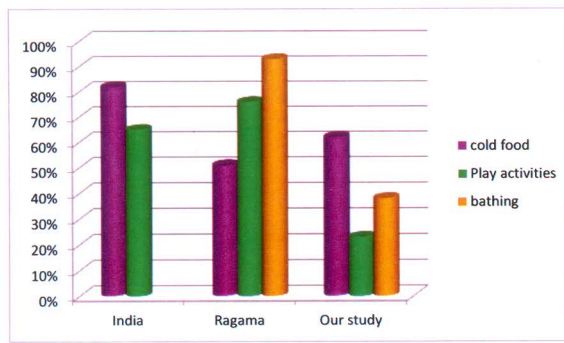
Bronchial asthma is one of the common chronic respiratory diseases affecting the children and it is one of the common reasons for school absentism. The prevalence is increasing worldwide as well as in Sri Lanka too. Childhood bronchial asthma has significant impact on social wellbeing and quality of the life of the children. So it is necessary not only to provide the optimal management for the children with bronchial asthma but also to study the impact of bronchial asthma on the life style restriction of children with bronchial asthma

This study brought to the light that there is significant limitation of daily activities enforced by their parents in children with bronchial asthma.

The restriction of foods is more practiced in our society than the restriction of other daily activities in the children with bronchial asthma.

Life style restriction in children with bronchial asthma is also reported in other countries too. Two similar studies in India and Kelaniya, Sri Lanka to assess the life style restriction in children with bronchial asthma showed the same results regarding no relationship with the restriction of food items with the severity of asthma. But in contrast to our study Indian study demonstrated the restriction of physical activity correlated with the severity of asthma control. (2, 4).

Figure 2 demonstrate some aspects of life style restriction in 3 different studies (2, 4).



This figure 2 demonstrates a comparison of the three studies on life style modifications. As suggested in other studies the restriction of food items may be more linked with the myths rather than the disease control.

This study emphasis the important of health education to the parent of children with bronchial asthma to improve the quality of life of the children with bronchial asthma.

#### References:

1. G M Bandaranayake, A P Wijesuriya, A descriptive study on usage of inhaled steroids in children. Sri Lanka Journal of Child Health 2010; 39 128-132.
2. Lodha R, Puranik M, Kattal N, Kabra SK. Social and economic impact of childhood asthma. Indian Paediatric 2003; 40: 874-879
3. Impact of Bronchial Asthma Symptoms on the Life style of Asthmatic Saudi Children, Riyadh, Saudi Arabia, - Saudi Epidemiology bulletin volume 14 2007
4. KAW karunasekera et al, Impact of Corticosteroid therapy on Lifestyle in Asthmatic children from Sri Lanka, Indial Paediatrics 2010 ;47 433-435