An observational retrospective study on the prevalence of childhood asthma in rural areas of Kanyakumari

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Abstract
Asthma is a significant non-communicable illness imposing a substantial burden on the health system globally. Approximately 300 million people worldwide have asthma, and it's anticipated that another 100 million will have it by 2025. Being the most prevalent chronic illness in children, asthma is a major reason for missed school days, sleep disturbances, and activity limitations. It is a significant health problem in developing countries like India. Information on the prevalence of childhood asthma in India's rural areas is still lacking. Hence, the objective of this retrospective study is to observe the trends in the prevalence of childhood Bronchial Asthma in Kanyakumari District, Tamilnadu and to find out the most commonly indicated homeopathic remedy for childhood asthma. A retrospective observational study was done on 44 cases of childhood asthma taken between January and December 2021 from the Out-Patient Department of Sarada Krishna Homoeopathic Medical College. This study concluded that children above 10 years are more prone to develop Bronchial Asthma and the most commonly indicated medicine is Arsenicum album, and the most frequently used potency is 0/6.

Keywords: Childhood asthma, allergic march, retrospective study, homeopathy, Arsenicum album

Introduction
Asthma affects both adults and children and imposes a significant impact on quality of life. Approximately 300 million people worldwide have asthma, and it's anticipated that another 100 million will have it by 2025 [1]. Globally, asthma is ranked 16th among the leading causes of years lived with disability and 28th among the leading causes of disease burden as measured by disability-adjusted life years. Geographical variations in asthma prevalence, severity, and mortality are significant. Although high-income countries have a higher prevalence of asthma, low- and middle-income countries have the highest asthma-related mortality rates [2]. Children and adults have different incidence and prevalence patterns for bronchial asthma. Although asthma can occur at any point in life, it frequently starts in childhood. Some people experience their first asthma attack as adults. Childhood asthma is more prevalent in boys whereas adult asthma is more common in women, and the reversal of this sex difference in prevalence occurs around puberty suggesting sex hormones may have a role in the etiology of asthma [3]. The high prevalence of bronchial asthma is a serious health concern in developing nations like India [4]. It is the leading cause of hospitalization for children and often results in elementary school absenteeism.

Need for the study
Studies demonstrate the global burden of paediatric asthma has increased over the last two decades. Still, information is lacking on Asthma prevalence in rural areas of India. The term “allergic march” or atopic march refers to the natural progression of atopic disorders. It begins with atopic dermatitis (AD) and food allergy in infancy to gradual development into allergic asthma (AA) and allergic rhinitis (AR) in childhood [5]. Individualized homeopathic medicine can help in preventing repeated exacerbations of bronchial asthma and improve the quality of life [6-8].

Aim and Objectives
To study the prevalence and distribution of asthma among children under 15 years.
To find out the most commonly indicated homeopathic remedy for childhood asthma.
Materials and Methods
Selection of samples
Sample size – 44 cases.
Sample technique – Purposive sampling.

Inclusion Criteria
Age group 0-15yrs
Children of both sexes
Children with asthma.

Exclusion Criteria
Children above 15 years
Patients taking medicine for any other chronic complaints.

Study Design
A sample of 44 cases presenting with asthma was taken from the Out-Patient Department of Sarada Krishna Homoeopathic Medical College. Cases reported with asthma were taken for the study and thoroughly analysed. After analysis, the patients were grouped based on age, medicine prescribed and potencies. From the collected data, prevalence trends of childhood asthma were observed.

Results

Table 1: Distribution of cases according to age group

| SL No | Age group | No of cases |
|-------|-----------|-------------|
| 1     | 0 to 5    | 8           |
| 2     | 6 to 10   | 14          |
| 3     | 11 to 15  | 22          |

Table 2: Medicines Prescribed For Childhood Asthma

| SL No | Medicine          | No of cases |
|-------|-------------------|-------------|
| 1     | Arsenicum album   | 13          |
| 2     | Pulsatilla        | 6           |
| 3     | Calcarea carbonicum | 4         |
| 4     | Phosphorous       | 4           |
| 5     | Natrum sulph      | 3           |
| 6     | Silicea           | 3           |
| 7     | Antimonium tartaricium | 2      |
| 8     | Arsenicum iodatum | 2           |
| 9     | Rhus toxicodendron| 2           |
| 10    | Bryonia alba      | 1           |
| 11    | Kali carbonicum   | 1           |
| 12    | Sanguinaria       | 1           |
| 13    | Spongia           | 1           |
| 14    | Thyroidinum       | 1           |
Discussion
From the above results in the study, it is observed that children between 11 to 15 years are more prone to Bronchial asthma. Out of 44 patients, 22 belong to the age group 11 to 15 years that is 50% are in the 11 to 15 years age group, 32% are in the age group 6 to 10 years age group and 18% are in 0-5 years age group. The most commonly used Homoeopathic medicines are Arsenicum album, Pulsatilla, Calcarea Carbonicum, Phosphorous, Natrum Sulph and Silicea. Among this Arsenicum album is indicated in most of the cases, 30% of cases are indicated by Arsenicum album, followed by Pulsatilla (14%) Calcarea Carbonicum (9%), Phosphorous (9%), Natrum Sulph (7%) and Silicea (7%). The most commonly used potency of Arsenicum album is 0/6 (54%), followed by 200th potency (38%) followed by 0/1(8%).

Overall, after the observations made from the study Childhood Asthma is more prevalent in children above 10 years and more indicated medicine is Arsenicum album and the most used potency of Arsenicum album is 0/6.

Conclusion
The retrospective study on Childhood Asthma concludes that children above 10 years are more prone to develop Bronchial Asthma and the most commonly indicated medicine is Arsenicum album, and the most frequently used potency is 0/6.

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