SUMMARY AND CONCLUSION
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The present study was conducted at the Allergy Clinic, Immunology and Biochemistry laboratory, Department of Pediatrics, M.L.B. Medical College, and Hospital, Jhansi during the period of 14 months from October, 1991 to November, 1992. A sample of 57 children which included 48 allergy patients and 9 children as control cases were considered in the study. All the cases were below 21 years of age. The study group was divided into following categories of patients - Bronchial asthma (34), allergic rhinitis (3), urticaria (8), and allergic rhinitis with bronchial asthma (3).

Primary aim of present study was to study the spectrum of allergic illness in children, and to confirm their allergic nature, by skin prick testing, using 21 allergens.

The reactivity of histamine at different ages was noted and precipitating factors in allergic disorders were observed. Furthermore, the effectiveness of immunotherapy in the asthmatic children was studied.

Diagnosis was based on detailed history, clinical examination and relevant investigations. Emphasis was given to frequency of attacks in a year, precipitating factors, history of worm infestations and family history of allergy.
Besides skin prick test, hemoglobin, total leucocyte count, differential leucocyte count and erythrocytes sedimentation rate were done. Absolute eosinophil count was calculated and stool examination was done for ova/cyst.

Allergy testing was done by modified prick test method using prick test solutions. Saline was used for negative control and histamine for positive control.

Immunotherapy was done by commercially available aqueous allergen extracts, to hyposensitize those patients who were diagnosed as being sensitive to allergen (after skin prick testing).

**FAMILY HISTORY OF ALLERGY AND SEX**

In the present study positive family history of atopy was found in 35.3%, 66.7%, 12.5% and 33.3% cases of bronchial asthma, allergic rhinitis, urticaria and bronchial asthma in conjunction with allergic rhinitis respectively. Present history found a family in which one parent (father) was atopic and his two children (one male and one female) were atopic out of a total 3 children he had. In the present study it was observed that nasal-bronchial allergy was common in male as compared to female (3:1) children. In urticaria, family history of atopy was present in 12.5% cases.

**BLOOD COUNTS IN DIFFERENT CLINICAL GROUPS**

All the patients and control cases had total
leucocyte count within the normal range. However, maximum mean eosinophil count of 8% was seen in bronchial asthma, allergic rhinitis and allergic rhinitis case associated with bronchial asthma.

Approximately 82.3% cases of asthma were having absolute eosinophil count more than 250/cmm, cases of allergic rhinitis had 66.6% and those of urticaria had 62.5%. Allergic rhinitis associated with asthma showed eosinophilia (AEC 7250/cmm) in 100% cases. In control group eosinophilia was seen in 11.5% cases. Eosinophilia was of the highest degree in those cases of bronchial asthma who had associated rhinitis (mean eosinophil count 805/cmm). In the present study a few cases of asthma (8.8%) had absolute eosinopenia.

**INTESTINAL PARASITIS IN ALLERGIC DISORDERS**

In bronchial asthma 4 out of 17 cases (23.5%) were positive on stool examination (two for cysts of Giardia lamblia, one for Amkylostomata duodenale and one for cyst of Ascaris lumbricoides). Absolute eosinophil count was higher in cases having helminthic infestation than in those who had protozoal infection or those who showed stool examination negative for ova/cyst.

Stool was positive for cysts of Giardia lamblia in 20% urticaria cases and after the treatment for Giardia lamblia, recurrence of urticaria did not stop.
SKIN PRICK TEST REACTION

Skin testing was done by modified prick method on volar surface of forearm. Histamine was used as a positive control and saline for negative control. In the present study both wheal and flare were measured by scale and divider.

Skin prick test was done in 25 cases out of 34 cases of bronchial asthma. Out of 25 cases 15 (60%) showed positive reaction.

Skin prick test was done in three cases of allergic rhinitis and all cases showed positive reaction.

Skin prick test was done in three cases of bronchial asthma associated with rhinitis. Out of 3 cases two cases showed positive reaction.

Skin prick test was done in two cases of urticaria and one was positive.

REACTION OF HISTAMINE AT DIFFERENT AGES

Reaction of histamine was lowest in infants who were clinically suspected to be suffering from milk allergy. Among asthma cases maximum reactivity (both wheal and flare) of 30 mm (with multiple pseudopodia) was seen in an 8 years old child.

DUST IN BRONCHIAL ALLERGY

Fourteen (50%) of bronchial allergy cases gave positive reaction to dust. Among the various sources of
dust, house dust gave the maximum positivity rate (39.3%). This could be the result of Jhansi having a dry climate for most of the time in a year. The next common dust allergen was paper dust seen in 21.43% cases, followed by cotton dust in 17.86% cases.

**POLLENS IN BRONCHIAL ALLERGY**

Six cases (21.43%) in the present study gave positive reaction to pollens. There were only 4 pollen extracts viz. Holoptelia, Parthenium, Pennisetum and Triticum used in the present study. Positive reaction to pollen of Parthenium was commonest (4 out of 6 cases) among pollens. This could be explained on the basis of high growing of Parthenium in Jhansi.

**INSECTS IN RESPIRATORY/BRONCHIAL ALLERGY**

Eight cases (28.5%) gave positive reaction to insect antigens. In the present study two insect antigens viz. mosquito and D. farinac were used. Positive reaction to mite (D. farinac) was the commonest among insect allergens (14.28%).

**fungus IN RESPIRATORY ALLERGY**

Two cases (7.14%) gave positive reaction to fungus i.e. Aspergillus flavus, the only fungal antigen in the present study.
SEASONAL VARIATION IN NASOBRONCHIAL ALLERGY

Seasonal variation was present in 66.7% cases of rhinitis, 76.5% cases of asthma and 66.7% cases of rhinitis with asthma. In 80.7% cases frequency of episodes increased during winter season.

PRECIPITATING FACTORS IN NASOBRONCHIAL ALLERGY

Cold was the precipitating factors in 85.7% cases. Second in importance was ice-cream (32.4%) and last was the viral fever in 10.7% cases. So, old dictum of avoiding cold, ice-cream and khatai in asthmatic children might have a definite basis.

SKIN PRICK TEST IN CHRONIC URTICARIA

Skin prick test was done in two cases and one was positive for urad dal. But, on withdrawal of urad dal, symptoms did not subside.

IMMUNOTHERAPY IN BRONCHIAL ASTHMA

In the present study immunotherapy was done in two cases. One case suffered from recurrent asthmatic attacks during hyposensitization and no beneficial effect was observed. While in other case of hyposensitization at the end of initial treatment, amelioration of symptoms and increase in peak expiratory flow rate was observed.