

in the form of showing pornographic material among male students (41 subjects [23%]) and touching of breasts (58 subjects [33.9%]) among females. The minimum age of victims at the time of the first incident was >16 years in 83 subjects (48.5%). The abuser was a friend in 32.1% (29 in males and 27 in females) of the cases. The perpetrators of sexual abuse were males for 132 subjects of both genders. In 56% (96 subjects), the time of abuse was between 2 and 10 PM. Forty-one subjects (23%) currently experience abuse memories in the form of unwanted scenes flashing in dreams, difficulty in maintaining relationships, feeling of guilt, fear, or nausea when touched, and disturbing sexual thoughts, alone or in combination.

**CONCLUSIONS:** These results provide baseline information on the prevalence and type of sexual abuse among adolescents. Abuse involved both genders, but the perpetrators were male. For nearly one fourth of the students the incident seems to have left a long-term psychological impact on the victim.

## Allergology

### CORRELATION BETWEEN ALLERGIC RHINITIS, ASTHMA, AND ATOPIC DERMATITIS IN CHILDREN

Submitted by Milica Šofranac

Milica Šofranac

Public Health Center Danilovgrad, Podgorica, Serbia, and Montenegro, Yugoslavia

**INTRODUCTION:** Allergic rhinitis, asthma, and atopic dermatitis are atopic diseases with the same pathogenic base with regard to the allergic reaction and the type of oversensitivity (facilitated by immunoglobulin E antibodies) with the release of numerous mediators causing allergic inflammation. The incidence of these diseases is increasing constantly. One precedes the others, or they often appear combined.

**OBJECTIVE:** The goal of this research was to establish the correlation between allergic rhinitis, asthma, and atopic dermatitis in children treated at our health center.

**METHODS:** In preparation for the research, 3638 medical charts of children aged 3 to 18 years were studied.

**RESULTS:** Processed were the cases of 142 children with allergic rhinitis (105 boys [73.9%] and 37 girls [26.1%]) who were diagnosed to have allergic rhinitis, asthma, or atopic dermatitis over the previous 4 years. The diagnosis was made on the basis of anamnesis, clinical record, skin-prick test, and consultation with the otolaryngologist. Of all the patients, 25 (17.6%) boys and 18 (12.6%) girls had atopic dermatitis, and 105 (73.9%) boys and 36 (25.3%) girls had asthma. The total number of children with atopic dermatitis was 43 (30.3%), and there were 141 (99.3%) with asthma.

**CONCLUSIONS:** In 30.3% of the cases, the children with allergic rhinitis also had atopic dermatitis; in 99.3% of the cases, the children with allergic rhinitis also had asthma. The degree of correlation between allergic rhinitis and asthma was higher than that between allergic rhinitis and atopic dermatitis. The boys suffered more often from allergic rhinitis, and its correlation with asthma was greater than that in girls, with whom it was combined with atopic dermatitis to a larger degree.

### CYTOKINE PROFILE IN LONG-TERM USE OF INHALED CORTICOSTEROID IN ASTHMATIC CHILDREN RECEIVING SPECIFIC IMMUNOTHERAPY

Submitted by Ariyanto Harsono

Ariyanto Harsono

Airlangga University, Jawa Timur, Indonesia

**INTRODUCTION:** Inhaled corticosteroids are widely used for the management of persistent asthma, including by those who receive specific immunotherapy.

**OBJECTIVE:** Our goal was to elucidate the cytokine profile in long-term use of corticosteroid inhalation in asthmatic children who were receiving specific immunotherapy.

**METHODS:** We performed a randomized, paralleled, comparative study of asthmatic children allocated into 3 groups: those in group A received inhaled budesonide, those in group B received specific immunotherapy, and those in group C received both specific immunotherapy and inhaled budesonide. The primary outcomes were interleukin 4 (IL-4), IL-5, interferon  $\gamma$  (IFN- $\gamma$ ), and IL-2 levels and forced expiratory volume in 1 second (FEV<sub>1</sub>) reversibility.

**RESULTS:** Significant differences were observed before and after treatment in all groups ( $P < .05$ ). Patients who received inhaled budesonide showed attenuation of IL-4, IL-5, IFN- $\gamma$ , and IL-2 and 29% failure of FEV<sub>1</sub> reversibility. Patients who received immunotherapy showed attenuation of IL-4 and IL-5, elevation of IFN- $\gamma$  and IL-2, and 24% failure of improvement of FEV<sub>1</sub> reversibility. Patients who received inhaled corticosteroids and immunotherapy showed attenuation of IL-4 and IL-5, elevation of IFN- $\gamma$  and IL-2, and 100% improvement of FEV<sub>1</sub> reversibility. Analysis of the discriminator yielded IL-2 as the primary discriminator, which correlated with the decrease of IL-5.

**CONCLUSIONS:** Long-term use of inhaled corticosteroids by children with asthma who received immunotherapy resulted in elevation of IFN- $\gamma$  and IL-2 and a decrease of IL-4 and IL-5. Addition of inhaled corticosteroids to immunotherapy resulted in marked attenuation of IL-5 and correlated with greater elevation of IL-2.

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