CLINICAL AND LABORATORY CHANGES AT CHILDREN WITH ALLERGIC RHINITIS AFTER 6 MONTHS TREATMENT WITH COMBINATION OF BETA-SITOSTEROL AND BETA-SITOSTEROL GLUCOSIDE.

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Background:

This study took place at 1st Pediatric Department of Aristotle University of Thessaloniki between May and December 2007. The aim was to investigate the affect of the combination of beta-sitosterol (BSS*) and beta-sitosterol glucoside (BSSG*) at children who suffered from allergic rhinitis.

Methods:

30 children-19 boys and 11 girls- with mean age 10,33 ± 3,71 years who had allergic rhinitis according to the ISAAC criteria and at least double value of total IgE immunoglobulin were included. The patients examined at the outpatient's Department of Respiratory Diseases at Hippokratio Hospital of Thessaloniki. All children received treatment with 1 caps BSS*/BSSG* 3 times a day for 6 months. For each children the completed questionnaire, before starting and at the end of the treatment, included:

- Detailed medical history.
- Clinical examination of the respiratory system.
- Clinical score (0-4) according to their symptoms
  - nasal obstruction
  - rhinorrhea
  - sneezing
  - itching
- Measurement of PIFR (**P**eak **I**nspiratory **F**low **R**ate).
- Measurement of PNIFR (**P**eak **N**asal **I**nspiratory **F**low **R**ate), using Youlten rhinomanometer.
- Determination of serum total IgE immunoglobulin.
- Determination of blood eosinophils.
- Determination of eosinophils at nasal secretion.

The statistic analysis was performed using SPSS.

Results:

PARAMETERS (n =30)	Before treatment	After treatment	p
Clinical score	3,06 ± 0,83	1,23 ± 0,86	<0,01
PIFR (l/min)	220,17 ± 85,48	253,34 ± 87,58	<0,001
PNIFR (l/min)	123,33 ± 52,03	144,67 ± 72,05	=0,014
Blood eosinophils	525,56 ± 324,89	397,83 ± 222,98	=0,032
Nasal secretion's eosinophils (%)	25,6 ± 16	16,12 ± 13,5	=0,018

The **total IgE immunoglobulin** decreased at 13 out of the 30 children of our study (43,3%) while the others presented a stability or a small increase in their IgE levels.

Conclusions:

The findings of this study prove the improvement of the children's clinical features and their better evolution after 6 months of treatment with BSS*/BSSG*.The medicine which includes the previously mentioned combination has been well accepted from the children without any complications .The results of the study are encouraging for BSS*/BSSG* when tested to children with major symptoms of allergic rhinitis. More intense study and further attendance of the patients, though, is necessary for the best possible evaluation and to concluding in safer conclusions.

References:

1. Bouic PJD, Lamprecht JH. Plant sterols and sterolins: a review of their immune modulating properties. Alt Med Rev 1999;4:170 – 177.
2. Myers L, Bouic PJD. Flow cytometric analysis of the TH1 - TH2 shift in allergic individuals using Moducare TM (sterols/sterolins) [Congress abstract]. In : Proceedings of the 26th Annual Congress of the Physiology Society of Southern Africa;Pliansberg;1998.
3. Brittle W, Clark A et al. Management of allergic rhinitis/conjunctivitis patients using a plant sterol/sterolin mixture: an open labeled study over 12 weeks. [Congress abstract]. In : Proceedings of the 26th Annual Congress of the Physiology Society of Southern Africa;Pliansberg;1998.