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# ANNALS OF ALLERGY, ASTHMA, & IMMUNOLOGY

January, 1995  
Volume 74, Number 1

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Official publication of the American College of Allergy, Asthma, & Immunology  
Next Annual Meeting: November 11-15, 1995, Dallas, Texas

## Abstracts: Poster Sessions

### P1 IMPACT OF INCREASING AEROBIOLOGICAL CHANGES FROM 1991-93. J. Mitta, C. Diaz, RMT, J. Oppenheimer, MD, L. Bielory, MD, Newark, New Jersey.

Pollen counting has become an invaluable aid in the practice of allergy. A Rotorod air impactor placed on the roof of the ambulatory care building of the New-Jersey Medical School was used for the collection of all samples. All counts were performed as per the protocol developed by the AAAI aerobiology committee. The number of airborne allergenic particles constantly changes from one year to the other. The amount of pollen and fungi, overall, have increased progressively during the last 3 years. Yet some species have increased and others decreased. The total pollen counts for 1993 were significantly higher than the counts for 1991 and 1992. In New Jersey Trees pollinate between February and June; and their count peaked at 492 Particles(P)/m<sup>3</sup> air in 1991; 863 P/m<sup>3</sup> air in 1992; and 1303 P/m<sup>3</sup> air in 1993. Pollen from grasses is present from May until October. Counts peaked at 36 P/m<sup>3</sup> air in 1991 and 1993; 17 P/m<sup>3</sup> air in 1992. Weeds pollinate between April and October. Peaking at 80 P/m<sup>3</sup> air in 1991; 75 P/m<sup>3</sup> air in 1992; and 145 P/m<sup>3</sup> air in 1993. This fluctuation is due to changes in climate, urbanization and changes in vegetation and may be one of the multifactorial variables associated with the increasing allergic and asthmatic problems seen in New Jersey.

### P3 SENSITIZATION TO POLLEN IN SAUDI ARABIA: REGIONAL VARIATION IN SKIN REACTIVITIES. A.R. Al-Frayh, MD; S.M. Hasnain, PhD; M.O. Gad-el-Rab, MD; K. Al-Mobalrek, MD; and S.T. Al-Sedairy, PhD, Riyadh, Saudi Arabia.

In order to study the role of outdoor aeroallergens in the sensitization of school children, 12 pollen extracts were used to conduct SPT on 485 patients in 6 regions. The results revealed considerable frequency and marked variation in IgE mediated skin reactions. In the agricultural region (n=66) *Chenopodium album* resulted in the highest (81.8%) reactions followed by *Atriplex polycarpa* and *Salsola tennifolia* (75.7%), *Cynodon dactylon* (71.2%), *Phoenix dactylifera* (37.8%), *Phleum pratensis* (33.3%), and *Rumex crispus* (27.2%). *Ambrosia* and *Artemisia* reacted in 15.1% of the patients only. In the mountainous region, (n=156), *C. dactylon* reacted in 25.7% of the patients followed by *C. album*, *A. polycarpa*, (21.9%) and *S. tennifolia* (14.7%). In the dry region, (n=120) *Lolium perenne* caused the highest reaction (25.4%) followed by *C. dactylon* (16.9%). Western humid region (n=120) showed highest reaction by *C. dactylon* (29.9%) followed by *Lolium perenne* (24.1%). The study suggests the role of pollen in the sensitization of children in previously known desert country and indicates regional variations.

### P2 NAIVE AND MEMORY CELLS IN HAY FEVER. M.L.Palma-Carlos, MD, PhD; A. Melo, MB; M. Conceição Santos, PhD; A. G. Palma-Carlos, MD, PhD. Lisbon, Portugal

Hay fever is a well known model of human(almost) experimental disease. Immune response to pollen inhalation is marked by specific IgE synthesis. However, the pattern of naive and memory cells evolution during pollen season is not clear. In patients allergic to grass pollens, CD45RA (naive) and CD45RO (memory) cells count were studied by flow cytometry done with a Coulter-Epics have been studied before (T0), during (T1), and after (T2) pollen season. CD2, CD4, CD8, CD25 PB counts have also been simultaneously studied. No significant changes have been observed in Pan T CD2-T0-825, 9+641,0, T1-1066,0+736,6 T2-798+67,9, Helper CD4-T0-515,4+403,9, T1-779,8+473,5, 479,9+414,4, cytotoxic CD8 T1-329,0+267,2, T1-476,2+281,5, T2-316,1+274,3 or activated CD25-T0-22,4+19,4, T1-28,0+21,0, T2-23,1+17,6. Memory cells CD45RO were roughly stable T0-424,2+349,7, T1-592,0+396,3, T2-446,4+346,1 but naive CD45RA significantly increase after pollen season. T0-576,6+474.1, T1-736,6+449,0 T2-917,8+499,8. P<0,05 (between Y2 and T1). These data point to a turnover of CD2 CD45 T cells with the replenishment of virgin cells after antigen stimulation or shift of other population to naive state.

### P4 A STUDY OF THE EFFICACY OF A LYOPHILISED ALLERGENIC EXTRACT IN THE PERFORMANCE OF ALLERGY SKIN TESTS, N. Sher, MD, FRCP(C), Toronto, Ontario.

This study was designed to determine whether a lancet coated with dried allergen is as effective in producing the typical wheal and flare as the standard epicutaneous test with a glycerinated extract. 48 patients were skin tested with a battery of allergens consisting of (1) mixed grasses (2) mixed tree pollen (3) animal hair (4) d. farinae. The skin tests were performed in the conventional manner. Patients who developed a positive reaction to the epicutaneous test with the glycerinated allergen were then retested on the contralateral arm with the lancet coated with dried allergen using exactly the same technique. A result was accepted as positive if the area of the wheal was 9 sq. mm. and the mean diameter in all patients was calculated. It was noted that all patients who were positive with glycerinated extract were also positive with the coated extract. There were no false positives or false negatives. The relationship of the mean of the areas of the wheal may be expressed in the following manner:

grasses [glycerinated] / grasses [coated] = 1.81:1,  
ragweed [glycerinated] / ragweed [coated] = 1.86:1,  
trees [glycerinated] / trees [coated] = 1.62:1,  
d. farinae [glycerinated] / d. farinae [coated] = 1.89:1.

It appears that a lyophilised allergen coated on the point of a lancet is as effective as a glycerinated extract in the performance of skin tests, although the wheal elicited by the coated extract is approximately 70% of the area of the glycerinated extract. Skin tests with an allergen coated lancet may have practical applications in the future.