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Abstracts: Poster Sessions

P1 IMPACT OF INCREASING AEROBIOLOGICAL TIMES FROM 1991-93. J. Mina, C. Diaz, RMT; J. Oppenheimer, MD; L. Bialory, 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 1990 and 1992. In New Jersey Tris pollen is highest between February and June; and their peak population occurs in 1991; 863 P/m^3 air in 1992; and 1303 P/m^3 air in 1993. Pollen from grasses is present from mid-September to mid-October. Counts peak at 36 P/m^3 air in 1991 and 1993; 17 P/m^3 air in 1992. Weeds pollinate between April and October. Peak at 80 P/m^3 air in 1991; 75 P/m^3 air in 1992; and 145 P/m^3 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 asthma problems seen in New Jersey.

P2 NAIVE AND MEMORY CELLS IN HAY FEVER. M.L. Palma-Carlos, MD, Ph.D; A. Melo, MD; M. Conceicao Santos, Ph.D.; A. G. Palma-Carlos, MD, Ph.D., 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 pollen, CD45RA(+) cells and CD45RA(-) cells seem to behave differently. Also, counter-spices have been studied before (TO), during (TI), and after (T2) pollen season CD2, CD4, CD8, CD21, and Fc epsilon R1. PBL counts have also been simultaneously studied. No significant changes have been observed in Pan-T CD2-CD7-825, 9261,0.11-1066,0.73,76.6; T2-796,57,9; helper CD4-70,515,4403,9 T2-71; 79,82-479,479,4414,4; cytotoxic CD8Ti-309,1267,2, Ti-447,2,281,5, T2-316,1274,3 or activated CD25-T2-22,419,9, T1-28,021,0, T2-23,177,6. Memory cells CD45RO were roughly stable T0-42,2 T2-349,7, T1-592,05396,3, T2-464,6,364,1 but naive CD45RA significantly increase after pollen season. CD2-736,6,447,1; T1-736.6,449,0, T2-917,8,999,8. PICO,05 (between T2 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.

P3 SENSITIZATION TO POLLEN IN SAUDI ARABIA: REGIONAL VARIATION IN SKIN REACTIVITIES. A.B. Al-Frayah, MD; S.M. Hasnain, PhD; M.O. Gadiel, Rab, MD; K, A-Mohmabreh, MD; and S.T. Al-Sadawi, PhD, Riyadh, Saudi Arabia.

Sensitization to pollen 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 reactivity. In the agricultural region (n=66) Chenopodium album was the highest (81.6%) reaction followed by Atriplex polycarpa and Salsola tenuifolia (75.7%), Gymnacanthus Dactylinus (71.2%), Phoenix dactylifera (37.8%), Phleum pratense (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. tenuifolia (14.7%). In the dry region, (n=120) Loliurn perenne caused the highest reaction (26.4%) followed by C. dactylon (16.9%). Western humid region (n=120) showed highest reaction by C. dactylon (29.9%) followed by Loliurn perenne (24.1%). The study suggests the role of pollen in the sensitization of children in previously known desert country and indicates regional variations.


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 (d) and f. 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 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
- ragweed [glycerinated]/ ragweed [coated] = 1.86
- trees [glycerinated] / trees [coated] = 1.62
- d f. [glycerinated] / d f. [coated] = 1.89

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.