SATURDAY

114 Changing of Allergenic Pollen Season in the Last Decade in the Italian Peninsula

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RATIONALE: Understanding how pollen in air changes the pollen count season is of particular interest and closely related to respiratory allergies. Climate change is also reflected in the seasonal pollen trend. This study aims to assess the state and trends of airborne concentrations of pollen belonging to 3 of the major allergenic *taxa* present in Italy - Gramineae, *Olea* and Urticaceae - from 2009 to 2018 in the 10 macro-areas of the Italian peninsula.

METHODS: The pollen data of RIMA – AIA they have been collected in compliance with current regulations (CEN/TS 16868: 2015). For each *taxon* the pollen trends were elaborated, considering phenological indicators and production indicators (Jäger et al., 1996). The 21.0 IBM-SPSS Statistics Software was used to evaluate the significance of the trends through linear regression RMA statistical analysis

RESULTS: There is a significant early start of the pollen season (Gramineae in Northern Adriatic p=0,034; *Olea* in South Adriatic p=0,018) and the peak day (Gramineae in Alps p=0,000, in Northern Adriatic p=0,012; in Po Valley p=0,047, in South Adriatic p=0,009; *Olea* in South Adriatic p=0,002), and a significant decrease in the API (Gramineae in Northern Tyrrhenian p=0,048; *Olea* in Alps p=0,040, in South Adriatic p=0,033; Urticaceae in Tyrrhenian Center p=0,003, in Northern Tyrrhenian p=0,045, in Po Valley p=0,044).

CONCLUSIONS: Today the monitoring pollen is an important instrument in order to evaluate the real allergy sufferer risk, because the pollen trend variations could modify the rate of allergic response in patients. The relevant climate change could explain these pollen season trend.

115 Association between Der p 23 and asthma in children sensitized to house dust mite

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RATIONALE: Der p 23, one of the components of house dust mite (HDM), has been identified as a potential major allergen which is considering as a predicting marker for the onset of bronchial asthma (BA). However, sensitization pattern is not fully investigated especially in young children.

METHODS: The subjects were Japanese children aged <13 years who were sensitized to HDM (N=95). A total of 95 cases including 48 BA and 47 non-BA cases were analyzed. Whether there was a difference in Der p 23 sensitization rate according to the presence or absence of BA was compared. In Der p 23 sensitization in the BA group, the combination of the allergic diseases was analyzed.

RESULTS: The sensitization rate to Der p 23 was 35% in the BA group and 17% in the non-BA group; the sensitization rate was significantly higher in the BA group ($p < 0.05$). Conversely, the level of s-IgE to Der p 1, Der p 2 was not different between the two groups. In the BA group, Der p 23-positive cases were more combinations of allergic rhinitis (76% vs. 48%; $p = 0.07$), and were fewer combinations of atopic dermatitis (29% vs. 81 %; $p < 0.05$) and food allergy (18% vs. 29%; $p = 0.50$) than Der p 23-negative cases.

CONCLUSIONS: Der p 23 sensitization rate in BA children was higher than non-BA children. Investigating sensitization to Der p 23 in allergic children may help identify the allergic phenotype.

116 Measurement of Dog and Cat Allergens Detected in Seoul Metropolitan Area

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RATIONALE: Allergens that cause asthma include those derived from indoor allergens such as animal dander (dog and cat). The aim of the study is to used for comparative studies of indoor environmental factors between populations with contrasting asthma prevalence.

METHODS: The study was performed during September through November(Autumn) 2018. A total of 100 residential homes were volunteers from different districts in Seoul. They participate in home environment survey and skin prick tests. The dust specimens were collected by vacuum cleaner(V-582T, 520W; LG). We detected animal dander(Can f 1 and Fel d 1) by monoclonal-antibody based enzyme-linked immunosorbent assays (ELISA).

RESULTS: The average indoor temperature was 26.1±3.1 ℃ and the relative humidity was 54.0±8.9%. The positive rate of dog (Can f 1) was 35.8% and cat (Fel d 1) was 33.2%. It is the same between Can f 1 and Fel d 1 distributed within dust samples from the four sites of the homes. And the distribution level of Can f 1 and Fel d 1 was, for the living room 26.2%, 17%, for the bedroom 20.9%, 15%, for the children's room 20.4%, 10.2%, for the kitchen 16%, 8.7 %, in descending order.

CONCLUSIONS: The positive rate of Can f 1 was higher than Fel d 1 in dust samples. The living room has highest distribution of dust samples among the four sites of a home. And it has similar distribution between Can f 1 and Fel d 1.