Editorial note:

This is the second issue of APAWG – WAO Newsletter. We wish to make the Newsletter accessible to as many countries as possible in Asia Pacific including the Middle East. We also wish to generate interest among Clinicians, Researchers and Scientists in the region. To achieve this, we have added two more members in the editorial board. Individual members and member societies are encouraged to submit news, views and short review articles for publication to APAWG-WAO-Editor.

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The Objectives of APAWG

The objectives of Asia Pacific Aeroallergen Working Group (APAWG) are to promote the impact of various indoor and outdoor aeroallergens in the sensitization and development of allergic diseases such as asthma and allergic rhinitis and to encourage and support technically the regional and emerging societies in the Asia Pacific region to undertake research and advance the knowledge of aeroallergens.

Since the commencement of this group, several workshops and symposia in the field of aeroallergens and medical aerobiology research have been organized during the World Allergy Congresses. The group has also published a manual entitled “Aeroallergen Monitoring Standard for the Asia Pacific Region,” intended for beginning allergists and researchers in the region.

Beginning with the second issue, an editorial board has been formed in order to make the newsletter accessible to Asia Pacific readers. This editorial board consists of:

- Prof. Abdulrahman Al-Frayh, Ex-Chairman, Department of Pediatrics and Ex-Dean, College of Medicine, King Saud University, Riyadh, Saudi Arabia.
- Prof. Ruby Pawankar, Nippon Medical School, Tokyo, Japan.

News from the Middle East Region

WAO Allergy Training School (WATS) Dubai, UAE

The Emerging Societies Program (ESP) in collaboration with AAAAI, EAACI and MEAAIC, hosted the First WAO Allergy Training School (WATS) on 29 March 2009 in Dubai during the First Middle East-Asia Allergy, Asthma, and Immunology Congress (MEAAIC).

Identification of Aeroallergens in Lebanon

Alaouie M et al, 2007, recorded the first aerobiological pollen data in Lebanon. The collection of pollen took place in Central Beirut only, for one year. Typical elevation of pollen counts in the spring was observed. The level was unexpectedly high for an urban area. The four most common pollen grains found over the study period are shown in the pie chart below.
Date Palm Pollen: A Significant Asthma and Allergy Inducer (Egypt)

Radwan et al, 2006, reported the characterization and allergenicity of the extracted proteins from date palm pollen (*Phoenix dactylifera* L.) which was rarely studied before. The results showed elevated total IgE and the SPT was positive in 25% of patients. Thus, specific IgE reflected sensitization to airborne date palm Pollen in both pollinators and the residents.

Aeroallergens and allergy in Saudi Arabia

1. Airway allergy and skin reactivity to aeroallergens in Riyadh (KSA)

Almogren determined the pattern of skin prick test reactivity to aeroallergens in patients with asthma and rhinitis (airway allergy) residing in Riyadh region. The study shows sensitivity to one or more aeroallergens was common in patients, indicating high level of aeroallergen sensitization in patients with airway allergy residing in Riyadh region. The most frequently reacting indoor and outdoor allergens were as follow.
2. Sensitization to locally prepared allergenic extracts of house dust mites in patients with respiratory allergy in the Kingdom of Saudi Arabia.

The aim of this study was to explore sensitization to locally prepared allergenic extracts of house dust mite (HDM) in patients with respiratory allergy in Saudi Arabia (KSA). The results showed a prevalence of sensitization to locally prepared allergenic extracts of HDM, especially *Dermatophagoides pteronyssinus* (DP) followed by *Dermatophagoides farinae* (DF).

**Aeroallergens study in Iran**

1. Impacts of Air Pollution Exposure on the Allergenic Properties of Arizona Cypress Pollen.

Epidemiological studies have demonstrated that urbanization and high levels of vehicle emissions correlated with the increasing trend of pollen-induced respiratory allergies. According to the results of this study, traffic-related air pollution by its direct effects on the elemental composition of pollen considerably increased the fragility of the pollen exine, causing numerous cracks in its surface and facilitating pollen content liberation.

2. Comparative Study of the Pollen Protein Contents in Two Major Varieties of *Cupressus arizonica* Planted in Tehran (Iran).

Recently *Cupressus arizonica* has been abundantly planted in Tehran, causing a significant increase of allergic diseases from the middle of winter to the beginning of spring. Thus, comparison of pollen protein content in two major varieties of *C. arizonica* planted in Tehran, including *C. arizonica* var. *arizonica* and *C. arizonica* var. *glabra* was carried out. The investigations revealed noticeable differences in protein content of each variety and indicated that *C. arizonica* pollen protein content may be influenced by environmental conditions.

3. Recognition and Isolation of the Major Allergen from *Achillea wilhelmsii* Pollen.

In this study, the comparison of pollen protein content in mature and immature pollen was obtained. *Bradford* protein assay revealed a higher total protein content in mature pollen than that of immature pollen. These results indicated that mature pollen grains are more allergenic than immature pollen.
News from India

1. The 15th National Conference of Aerobiology

The 15th Conference of Aerobiology was held at Imphal, the capital of Manipur state, India, from 6-8 March 2009. The conference is organized in alternate years in different parts of the country under the auspices of Indian Aerobiology Society. The next conference will be held at Devangere, Karnataka at the end of 2010.

2. The Indian Journal of Aerobiology

The Indian Journal of Aerobiology is regularly published and can be subscribed by contacting Dr. AB Singh, Institute of Genomics and Integrative Biology, Delhi University Campus, Delhi 110007, India. Editor, Indian J Aerobiology

Events

1. MEAAAIC, Dubai 2009

MEAAAIC 2009 in Dubai was the First Middle East-Asia Allergy Asthma Immunology Congress with the theme of New Horizons in Allergy, Asthma & Immunology. The program presented a valuable opportunity for regional Clinicians and Researchers with scientific programs and internationally renowned faculty to update their knowledge, advance their skills as well as interact with colleagues and experts in the field.

The scientific program in MEAAAIC 2009 consisted of plenary sessions, parallel symposia, multiple workshops and free papers as oral and posters presentations on the most current topics in allergy, asthma and immunology.

2. World Asthma Day in Riyadh, Saudi Arabia

World Asthma Day 2009 was celebrated at King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia on Thursday, May 7. The program was organized by Asthma Education Committee in collaboration with Allergy and Medical Aerobiology Unit. Nursing, Pharmacy, Nutrition and Respiratory Care Departments also participated. The event took place in Public Park within KFSHRC where hundreds of individuals and families gathered to attend the program and learn about the causes and the prevention of allergic diseases and asthma. The program included display and explanation of common allergenic plants, house Dust Mite and Fungal allergen as well as lectures presented by Dr. Rand Arnaout, Allergist/Immunologist, Department of Family Medicine and Polyclinic and Dr Syed Hasnain, Head of Allergy and Medical Aerobiology Unit, respectively. Besides that, entertainment and play time were organized for kids. Quizzes, prices and many other interesting activities were included in the program. Therefore,
World Asthma Day program provided useful and important information in raising the awareness about asthma.

Members of the Allergy Laboratory at KFSH&RC demonstrate common allergenic plants, house Dust Mite and Fungal Allergen

Forthcoming Regional Events

1. The 3th Iranian Asthma Meeting, 17 - 19 November 2009
   Tehran, Iran
   http://isaacong.tums.ac.ir

2. Allergy, Asthma and Clinical Immunology Symposium, 17 – 18 November 2009
   king Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia
   E-mail: hamoudalmousa@kfshrc.edu.sa

3. 14th International Congress of Immunology, 22-27 August 2010
   Kobe, Japan
   www.ici2010.org

4. ASCIA 20th Annual Scientific Meeting, 16-18 September 2009
   Australasian Society of Clinical Immunology & Allergy (ASCIA)
   September 2009
   Adelaide, South Australia
   www.ascia2009.com

5. Turkish National Society of Allergy and Clinical Immunology, 3-7 November 2009
   Antalya, Turkey

6. Annual Congress of Allergy and Clinical Immunology, 26-27 November 2009
   Egyptian Society of Allergy and Clinical Immunology
   Cairo, Egypt
7. The 8th Asia Pacific Congress of Allergy, Asthma and Clinical Immunology, 7-10 November 2010
Singapore.

E-Mail: admin@apcaaci2010.org

Forthcoming International Events

1. 15th Annual Asthma, Allergy and Immunology Update, 30 – 31 July 2009
Albany, NY, United States
E-Mail: amccme@mail.amc.edu

2. 27th Annual Aspen Allergy Conference, 29 July - 1 August 2009
Aspen, Colorado, USA
E-Mail: www.jillhibbeln@gmail.com

3. 3rd Gemeinsamer Deutscher Allergie-Kongress, 3 - 6 September 2009
German Society for Allergology and Clinical Immunology
www.dgaki.de

4. 6th Annual Conference of the German Joint Society for Clinical Chemistry and Laboratory Medicine (DGKL), 7-10 October 2009
Leipzi, Germany
http://www.dgkl2009.de

5. CSACI Annual Scientific Meeting, 22-25 October 2009
Canadian Society of Allergy and Clinical Immunology
Halifax, NS
http://csaci.ca/

6. Allergy and Immunology Conference Cruise, 10-17 October 2009
Honolulu, HI, United States
E-Mail: Sandra@continuingeducation.net

7. American College of Allergy, Asthma and Immunology, 6-11 November 2009
Annual Meeting
Miami Beach, Florida, USA

8. EAACI 2009, 12-14 November
Presidente Intercontinental Los Cabos Resort
Los Cabos, B.C.S., Mexico
http://themacraegroup.com/default.htm

10. 4th European Workshop on Immune-Mediated Inflammatory Diseases, 18-20 November 2009
Cascais-Lisbon, Portugal
E-Mail: imid@medicongress.com

11. 3rd National Conference: Paediatrics Asthma and Allergy, 09-10 November 2009
London, England, United Kingdom
E-Mail: conferences@markallengroup.co.uk

12. XXI World Allergy Organization (WAO), 6-10 December 2009
World Allergy Organization Congress
Buenos Aires, Argentina

13. American Academy of Allergy, Asthma & Immunology (AAAAI), 26 February - 2 March 2010
66th Annual Meeting
New Orleans, LA, USA

14. FOCIS, 24-28 June 2010
Marriott Boston Copley Place
Boston, Massachusetts, USA

15. 9th International Congress on Aerobiology, 23-27 August 2010
Quadrennial congress of International Association for Aerobiology
Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”
Buenos Aires – Argentina
Recent Publications from the Asia Pacific Region

The following are some recent selected publications (during the last 3 years) from the Middle East region on the subject of Allergy and Aeroallergen:

Allergy to pollen grains

Full paper


In this study pollen, concentration was evaluated in the atmosphere of Abha city, Saudi Arabia with relation to meteorological parameters. It was found that pollen concentration is positively correlated with temperature and negatively correlated with rainfall, relative humidity and wind velocity.


The aim of this study was to identify indoor pollen grains during and out of pollination season in the Kayseri city, for their percentage values, pollen season periods and pollen concentration. It was concluded that the high level of pollen in indoor dust might be an important cause of pollen allergy symptoms out of pollination season.


Pollen from the Salsola spp. are an important source of respiratory allergy in tropical countries. Thus, the aim of this study was to characterize the IgE binding proteins of S. incanescens pollen extract and to study its cross reactivity with S. kali pollen allergens.

A Tafileh Mountain lies in the southern part of Jordan. It has the highest highlands that support the growing of forests and woodland vegetation. Therefore, this study the changes in pollen grains fall per cm² was determined weekly, monthly and annually.


Pollen from the Cupressaceae family are considered important allergens in the Mediterranean area. The prevalence of allergic symptoms was ranged from 1.04% to 35.4%. Thus the objective of this study was to detect the prevalence of cypress pollen sensitization and determine its clinical importance in patients with seasonal respiratory allergy.


*Amaranthus* pollen grains are known to be highly allergenic and a potential cause of respiratory allergic diseases. Therefore, this study was conducted to investigate and records the airborne incidence of *A. viridis* and other allergenic pollen in seven different regions of Saudi Arabia.

**Allergy to Fungal spores**


There is increasing concern about the exposure to fungal aerosols in occupational environments and associated respiratory allergic diseases and asthma. A large number of students and teachers stay for long time in schools around the world. Thus, the objectives of this study were firstly, the survey of airborne fungal spores in outdoor and indoor environments in student classrooms.

**Prevalence of Allergy and Asthma**

The objective of this work was to explore the spectrum of allergy investigations in patients with allergic rhinitis (AR) in Jeddah, Saudi Arabia. From the results, it was found that the predominant allergens were house dust mites.

**Published Abstracts**

**Allergy to pollen grains**


The aim of this study was to examine IgE mediated sensitization level to a number of weeds pollen. The study indicates that sensitization and exacerbation of symptoms in patients during pollination seasons may be caused by desert weeds growing in the Kingdom, and may possibly be a major contributor of respiratory allergy in Saudi Arabia.


The aim of this study was to document the sensitization to pollen and to evaluate their clinical importance in patients with seasonal allergic rhinitis living in Ankara/central Anatolia. The results indicated that trees were the most common pollen source followed by grasses and weeds.


Saffron contains an aeroallergen that causes reactive respiratory allergic reactions in atopic subjects. Therefore, this study was conducted to investigate the role of specific IgE and IgG in respiratory allergic reaction caused by Saffron.

The aim of this work was to evaluate IgE cross-reactivity between Date palm DP and autochthonous palm (European fan palm, EFP) pollen extracts, to chemically modify DP extract with potassium cyanate in order to obtain an allergoid, and to characterize it.


In this study, antigenic and allergenic components of date palm (*Phoenix dactylifera*) pollen were investigated to observe their effects on the skin test reactivity, lymphocyte blastogenesis and cytokine production in atopic and healthy individuals.

***Allergy to Fungal spores***


In this study, the spores of *Cladosporium* spp. and *Alternaria* spp were monitored from the Sivrihisar (Eskisehir) atmosphere throughout 2005 to 2006. It was concluded that the effects of temperature and relative humidity on the spore numbers of *Cladosporium* spp. and *Alternaria* spp. were significant according to the month in which they were collected.


In this study, a quantitative and qualitative survey was carried out for airborne fungus spores coming into contact in Giza city, Egypt. *Alternaria*, *Aspergillus*, *Cladosporium* and *Penicillium* were the most predominant fungal genera.

***Allergy to Animal/ domestic pets***


The aim of the this study was to determine whether exposure to pets and domestic animals plays a significant role in the development of asthma and allergic rhinitis among Qatari school children aged 6–14 years.
Prevalence of Asthma and pollen sensitization


The aim of this study was to characterize the most frequent indoor and outdoor (grass and tree) inhalant allergens involved in allergic rhinitis in Mashad, Iran. It was revealed that the prevalence of the Skin Prick reactivity to outdoor allergens particularly grasses (weeds), is high among Iranian allergic rhinitis patients.


The objective of this project was to investigate the prevalence of allergic diseases among schoolchildren (3 to 16 years of age) in the city of Karachi. The Survey results showed that the frequency of diagnosed cases of asthma stood at 15.8%, while the frequency of allergic rhinitis was found to be 28.50% among these children.


The objective of this study was to estimate the prevalence of asthma and allergic diseases in 13- and 14-year-old schoolchildren and to compare it with previous phase I data. The findings show that there is a decrease in the self-reported symptoms of allergic diseases over a 5-year period while physician diagnoses of these diseases remained the same over the same period.


This study was conducted to measure the prevalence and sensitization to weeds pollen in Saudi Arabia. Patients reacted positively to various weeds pollen. The highest skin reactivities were recorded by members of the chenopodiace weeds in all regions.

This study was conducted to investigate the deaths of three patients due to asthma, during the last ten days of March in order to find a possible cause of these symptoms. From the results, it was concluded that it is probable the deceased patients suffered from allergy to pollen of paper mulberry and expired due to the thunderstorm effect, during the peak of paper mulberry pollen allergy.


The objective of this study was to determine the prevalence and etiology of childhood asthma in Saudi Arabia. The results showed that Bronchial Asthma emerged to be one of the prevalent diseases in Saudi Arabia and showed regional diversity.

*Aeroallergens reactivity*


This project was conducted to diagnose allergic patients with more relevant allergenic species, which they are directly exposed to. The results of this efficacy trial of indigenous allergens revealed that majority of these allergens were effective with moderate to severe reactions.


The aim of this study was to determine the distribution of allergens among allergic rhinitis patients living in the Shiraz region. The most common allergens were tree mixture and grass in the Shiraz region. It was concluded that the distribution of allergens is associated with the climatic, environmental and socioeconomic features of the region.


This project was conducted to study the aerobiology of Islamabad. It was found that the pattern of pollen and molds is nearly the same in spring season the highest pollen
counts were those of B. papyrifera. During fall season pollen of Cannabis sativa were prevalent. Mould spores found throughout the year with periodic variation.

References


