The increasing complexity and burden of allergic diseases and asthma in the Asia Pacific region

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Remarks of Professor Ruby Pawankar:

Good morning and a warm welcome from the World Allergy Organization for the World Allergy week!

Allergic diseases like asthma, allergic rhinitis or hay fever, food allergies, anaphylaxis, atopic eczema or skin allergies are on the rise. These diseases affect up to 30 to 40% of the population worldwide. For example, asthma affects 300 million people worldwide and according to the World Health organization the prevalence of asthma is expected to reach 400 million by 2025. Rhinitis or nasal allergy affects 400 million people worldwide, and rhinitis is a risk factor for asthma. Many patients with asthma have rhinitis and this markedly affects the quality of life of the patients. In a study done by WAO in 4 countries in Asia the impact on the quality of life in children suffering from both asthma and allergic rhinitis was far worse than those with asthma alone. Moreover, the severity and complexity of allergic diseases, including asthma, continue to increase. This escalation in the prevalence of allergies is especially seen in children and young adults who bear the greatest burden of these trends. Furthermore, allergic diseases often commonly occur together in the same individual, in that a patient may suffer from asthma, rhinitis and food allergies at the same time.

With the increase in multiple allergies in a single patient and the increase in food allergies, anaphylaxis, and severe asthma, the impact of severe and complex allergies is considerable. The socioeconomic burden of allergic diseases is also high. The costs are direct costs arising from cost of medication and hospitalization or emergency care visits and indirect
from loss of work productivity and death. Direct costs in the United States for asthma are about $15 billion (USD), and indirect costs are up to $5 billion (USD). In the Asian Pacific region the costs in Korea are almost $2 billion (USD) for asthma alone. The annual per-patient direct costs range from $108 (USD) in Malaysia to $1,010 (USD) in Hong Kong. Total per-patient costs, including productivity costs, range from $184 (USD) in Vietnam to $1,189 (USD) in Hong Kong.

This dramatic increase in the prevalence of allergies is observed as societies become more affluent and is therefore seen in emerging economies in middle and low income countries too. This increase is also a result of an increase in outdoor and indoor pollution, urbanization, and change in life style and dietary habits. Other contributing factors include the hygiene hypothesis, climate change and reduced biodiversity. This indicates the need for better environmental control measures.

Despite the high prevalence of allergy in the population, expert or specialist care is very difficult to access in many countries, and there is a lack of appropriate training. Moreover, efforts targeting allergic diseases are still very fragmented. Integration of efforts targeting allergic diseases is important in addressing the problem. The World Allergy Organization is greatly concerned about the increasing global burden of allergic diseases and has therefore put forward a set of recommendations, the “Declaration of Recommendations,” in the WAO WHITE BOOK ON ALLERGY.

The WAO WHITE BOOK ON ALLERGY recommendations call on governments and health care policy makers to address the following needs:

1. Global epidemiological studies to assess the true burden of allergic diseases
2. Implementation of appropriate environmental control measures and development of adequate preventative measures
3. Increase in the availability, accessibility and affordability of drugs
4. Increase in the capacity building among those treating allergies
5. Increase in the clinical expertise among general practitioners and allied health
6. Increase in public awareness among the lay public and patients

In the light of this ever-increasing threat of allergic diseases, global partnerships of multidisciplinary teams involving clinicians, academia, patient representatives, and industry, should work toward a common goal of reducing the burden of allergic diseases. This work should involve developing cost-effective, innovative, preventive strategies and a more integrated, holistic approach to treatment, thereby preventing premature and unwanted deaths and improving the quality of life of patients. WAO is committed to establish a regular channel of communication and dialogue with all stakeholders on the most important issues that can make an impact in addressing the unmet global public health need of severe and complex allergies working toward improved patient care, better health care delivery, prevention, and improvement of the patient’s quality of life. Thank you!
Remarks of Professor Motohiro Ebisawa:

The prevalence of atopic dermatitis, food allergy, bronchial asthma, allergic rhinitis, allergic conjunctivitis, pollinosis, and anaphylaxis has been increasing in countries throughout the Asia Pacific region over the past 50 years. As countries become developed and industrialized, the prevalence of allergic diseases increases in societies with a higher economic level. It is important that all of us in the region become more informed about allergic diseases in order to be better prepared for them.

Allergic diseases are interrelated. For example, most of the food allergy during childhood comes from infants with atopic dermatitis within 3 months after birth. The probability of developing asthma is extremely high among those children. Co-morbidity between asthma and allergic rhinitis is known to be 70 to 80 percent.

Anaphylaxis is the most severe phenotype of allergic disease, and it can result in fatality. Food allergy is the number one cause of anaphylaxis. Insect venom such as from a bee sting also can be fatal. The co-morbidity of food allergy and asthma is a risk factor for developing anaphylaxis. To treat anaphylaxis and prevent fatalities, prehospital care by auto-injectable adrenaline (epinephrine) is very important. Auto-injectable adrenaline (epinephrine) such as the EpiPen is available in some countries such as Australia, Japan, Singapore Malaysia, Thailand and Korea; however, this form of treatment has not been introduced yet in many Asian countries.

The World Allergy Organization and the national and regional societies in its federation have a wealth of informational resources available online in English – including the American Academy of Asthma, Allergy and Clinical Immunology, the Australian Society of Clinical Immunology and Allergy. In addition, resources in local languages are also available on the websites of societies in Japan, Korea, Thailand, Singapore, Hong Kong, India, China, and other countries. Nursery and school allergy guidelines are also available in some countries such as Australia, New Zealand, and Japan. Links to allergy, asthma and immunology societies are online at www.worldallergy.org/wao_societies/members.php.

Allergy specialists can provide an accurate diagnosis with their knowledge, skills and advanced diagnostic technology, including skin prick tests, various kinds of IgE testing, lung function tests, and even provocation tests. They can also provide detailed information and instructions on each allergic disease. They can manage allergic disease with the appropriate medications, and furthermore treat allergic diseases with immunotherapy, which has a history of more than 100 years. Allergen avoidance is one strategy to manage allergy, however, in some situations, the allergen avoidance strategy does not work. Allergen specific immunotherapy is used to treat allergic diseases such as pollinosis, atopic types of asthma, and even food allergy by introducing gradually increasing doses of the causative allergenic protein to patients starting from low dose to high dose. The number of allergy specialists in the Asia Pacific region is insufficient yet to address these special medical needs. WAO is committed to providing education and training in the specialty of allergy/immunology and resources for patients, guardians, and caregivers to meeting the increasing demand for care and prevention of allergic diseases and asthma.