Congress Interviews

Experts in allergy and immunology discuss advancements in the field, including the use of modern skin tests in allergology and sublingual tablet immunotherapy for paediatric patients. Plus, a joint interview with the current and future presidents of the European Academy of Allergy & Clinical Immunology (EAACI) gives insight into the largest European medical association in the field.

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> **We have to reach out to other specialities to help us because there are simply too many patients to deal with**

Citation: Citation: EMJ Allergy Immunol. 2024;9[1]:56-59. https://doi.org/10.33590/emjallergyimmunol/VSCQ5958.

Q1 Your research spans dermatology, venereology, and allergology. What drew you to these areas, and how do they overlap?

In dermatology, the immune system is always an important player. We have a lot of hypersensitive reactions, and that's how I came into contact with allergology, via eczema. Delayed type (Type 4) allergy/allergic contact eczema was my entrance into the field. Besides allergic contact eczema, eczema turns out to often be mediated by drugs, and the next step for me was to study drug hypersensitivity. Additionally, hymenoptera venom allergy in Austria is managed by dermatologists. Therefore, this was the second branch, taking care of these patients, mainly by allergen-specific immunotherapy with hymenoptera venom. This field also involves the management of anaphylaxis. Thinking about anaphylaxis not only involves IgE-mediated food allergy, but also mastocytosis and mast cell tumours. When I entered medicine 25 years ago, it was not so clear that we would end up with a connection between mast cell biology, anaphylaxis, and venom. Nowadays, this field has expanded to also comprise various aspects of drug hypersensitivity.

Q2 Are there any particularly exciting sessions at the European Academy of Allergy and Clinical Immunology (EAACI) that you have attended, relating to your specialties?

This is what really has changed a lot. Drug hypersensitivity has always been a niche area of interest, and now we are having plenary sessions on β-lactam hypersensitivity. I think the main driver for us is that the diagnosis is wrong in most cases, and how to get rid of the false label penicillin-allergy. The real driver for this comes from another area of medicine, which is the bacterial resistance to antibiotic drugs. As we have no alternatives, we have to return to penicillin. There are just a few allergists in the world, and then there's 10% of

the population claiming to be, or being labelled as, 'suffering from penicillin allergy'. So, it is very clear that allergists cannot cope with this alone. We have to reach out to other specialities to help us because there are simply too many patients to deal with. I think from this Congress, this is one of my major conclusions. We have now come to the point where we need to address this in a different way. We have to create simple standard operating procedures that can be understood by general practitioners, and by most specialists in internal medicine who can take the load of patients when there are simply too many.

Q3 Can you provide any insights into the future trends or directions that you think the fields of drug hypersensitivity and molecular allergology will take in the next decade?

I think what we will see in the future is, of course, what we see in many fields of medicine: a lot of new drugs. Biologics have also entered allergy, and the one very old drug, anti-IgE, is now finally used in a different way; for example, to take care of children with severe food allergies, we must not treat the allergy, but control anaphylaxis. Plus, we have modern high-dose sublingual allergen immunotherapy now, which has finally arrived in the paediatric field. So, in paediatric allergology we already have the licence for subcutaneous immunotherapy, but now also for modern sublingual tablet immunotherapy. I think this is another new aspect of this conference, that we have to use what is standard also in other medical specialties. We should prefer evidence-based therapy, and rely on drugs that have proven to be useful in studies, and not what has always been used in the traditional setting. I think this is also another nice aspect, that now we have new licensed drugs also available for children.

Q4 In your last interview with us in 2018, you said that you felt atopic eczema was a largely overlooked topic within the field. Six years later, does this still hold true?

Six years ago, as a dermatologist, I was always a little bit anxious about what was going to happen with eczema, because psoriasis was exploding; every few months, they had a new drug for psoriasis. Now, finally, we are here for eczema; we have a lot of new drugs. However, in my point of view, we have a problem, and that is the price. Pricing is extremely high. We have a lot of new drugs for the many severe patients on the top of the pyramid, but what about the base? There, we

don't have many new treatments to offer, and that is a little bit of a strange feeling. If you go and listen to the lectures, you have the impression that nearly every patient is treated with a new, expensive biological or JAK-inhibitor drug. However, everybody knows that if we really followed this track, then we would simply crash our entire healthcare systems, because all these new drugs are too expensive. My feeling is that that we got a little bit out of balance; there are these few privileged patients who receive these new medicines, and then there are the many other underprivileged patients, for whatever reason, who don't manage to get to the point where they can get access to the new medication. This is not very special about allergology. It's a problem with all medicines, that the old drugs are cheap, and the new drugs are innovative and at the same time extremely expensive, leading to disparities in access to treatment. To return to the original question, of course now we have JAK inhibitors for eczema reactions, we have a lot of biologicals, and we have, especially with anti-interleukins, a new way of understanding the pathophysiology of atopic diseases. We don't treat the eczema, we don't treat the rhinitis, we don't treat the asthma; we can treat the underlying allergy, and indirectly, we control all the different aspects of these allergic diseases.

Q5 How does EAACI increase awareness of different aspects of allergy and immunology, and what could they focus on more?

I think the most important thing about EAACI is that it brings together so many different specialties, as allergology and clinical immunology in every single country are organised in a completely different way. This poses a great difficulty for pharmaceutical companies when they want to develop new drugs. It is difficult to find out whom to address and who is the person responsible in each country to see the right patients for this diagnosis. I think this is one of the great things about EAACI; bringing together these people. In most countries, allergology does not exist as an own specialty but only as a subspeciality, or allergology does not exist at all. Allergology is a small specialty, and although a decent proportion of the population is affected by allergic diseases, allergology is often not seen by healthcare politics. This makes an organisation like EAACI a very important player on political grounds to make allergology visible; it is big enough to make an impact.

Q6 Are there any research areas you feel merit greater attention at next year's EAACI?

A thing, we haven't addressed until now is molecular allergology. This field is really evolving at high speed, so you never know what comes next. I think what we currently see, if we look at the molecular sensitisation pattern to food and inhalant allergens, is that now we can better understand what the specific molecular allergens are. However, what is still difficult is the sensitisation aspect; measuring specific IgE does not actually mean suffering from an allergy. For every allergy specialist or every clinician who treats patients, this is one of the most important things to understand. You have to find out which of the sensitisations that are detected with allergy tests have actual implications for the patient, and which ones remain

'silent', either because they will become an allergy sometime in the future, or were outgrown sometime in the past. Allergy tests are very sensitive, and they still will pick up sensitisations that have lost their meaning for the patient. This is, at the moment, a part of the problem that makes using molecular allergology a little bit complex. We get a lot of information, and we somehow have to filter it, to make it useful for the sake of the better management of the patient. At the moment, this is a lot of work. It remains to be seen how much AI can help us sort through this information in a better way. Currently, I'm a little bit critical about the usefulness of AI, and the reproducibility of AI for solving this puzzle in a better and more clinically relevant way. In my daily clinical practice, more information gathered with the help of molecular allergology from a single patient means to me that I need much more time for the individual patient, at least double or triple the time, than when I compare it with conventional extract-based diagnosis.

Another thing that is very important to me is that, although we have all these new modern tools, skin tests are the major work-horses in allergology: the skin prick test, the intradermal skin test, and also the patch test for late-type hypersensitivity, which is not a major topic at EAACI. We have the problem that these commercially available, standardised skin test substances are disappearing at a dramatic pace. On one hand, in Type 4 (delayed type) allergy, we don't have a replacement at the moment for the patch test, and on the other hand, in Type 1 allergy, the skin tests have one big advantage over *in vitro* molecular allergology testing. It is ready after 15 minutes, so you can discuss test results with the patient within 15 minutes, and you don't have to wait for laboratory results to come in the next day. After a skin test, the patient doesn't have to come back to the office for another appointment, and this saves a lot of time for the mostly easy cases in times of very limited resources. Let's make sure that we don't lose the skin test substances!

Q7 Lastly, what has been your key takeaway from this year's Congress?

My key takeaway is that we should try to make it possible to de-label as many patients as possible with this false labelling of 'penicillin allergy'. We somehow need to find out, for each country and each healthcare system, how we can move along with this. The conventional allergological approach is working well and is getting good results, but it is too time-consuming for the many falsely labelled patients. There are too many patients, and too few allergy specialists. We have to solve this problem by outreaching to other specialities and to general medicine. This is my personal key message.