Transcript Details
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Key Allergy Highlights from AAAAI 2017: Celebrating Past Discoveries, Current Guidelines, & Future Developments

Narrator:
Welcome to ReachMD. The following program Key Allergy Highlights from AAAAI 2017: Celebrating Past Discoveries, Current Guidelines, & Future Developments is sponsored by Thermo Fisher Scientific.

Dr. Matt Birnholz:
Hi, I'm Dr. Matt Birnholz from ReachMD. I recently had the opportunity to speak with allergy experts at the American Academy of Allergy, Asthma & Immunology conference in Atlanta, Georgia, where a celebration was underway commemorating the 50-year anniversary of the discovery of IgE. We also touched upon important allergy guideline updates, such as the Peanut Addendum to the NIH Food Guidelines and the newly issued Stinging Insect Practice Parameter.

But first, let's take a look at the perspectives shared from my guests looking back at the discovery, development and evolution of IgE.

Dr. Magnus Borres:
I think it's a fascinating story that, this took place 50 years ago at my hospital, the Uppsala University Hospital. Actually, one young doctor discovered that a patient produced IgE, that was a cancer patient, and they started to unwind that story, what that was all about. And at Uppsala, we are still talking about that, and it's a living history, because those three men that did the discovery are all alive and still active in the field of research.

Dr. Paolo Matricardi:
IgE was discovered in '66-'67 and since then, we have had so many progress in the use and the knowledge of this molecule for allergic diseases. In particular, in the diagnostic part, we have seen the development of the techniques, starting with a simple test, studying as positive or negative, and arriving to progressively to more precise definition of the quantity of the total IgE, but also the specific IgE, to extracts and now to molecules.

Dr. Thomas Platts-Mills:
Since the discovery of IgE, there were two things. One was the discovery and the other was the development of methods to measure it, the ability to measure IgE accurately has changed the way we think about allergic disease and changed many things.

Dr. Paolo Matricardi:
The bad thing is the susceptibility of the humans that is becoming more and more allergic, and so, the need for prevention is no more to avoid the allergen, to exclude allergens from our life, but to learn how to administrate the allergens into the body so that the immune system learns to tolerate them. And this is the adventure of the medical science in the area of allergology of these years and a lot of studies are going into a different type of prevention, especially in food allergy, where before we were eliminating a lot of foods, milk, egg, and so on, and now we are learning how to administer these foods in the first year of life, in order to train the immune system, and to prevent the development of these allergies and the others in the future of the life of the child.

Dr. Thomas Platts-Mills:
Well, if you think about what the assays are doing. If we want to measure IgE or IgG for antibodies to specific proteins, the process of purifying allergens is very expensive and very highly technically difficult, so that making recombinant molecules, which you can produce in large quantities; actually on an industrial scale you can produce recombinant molecules, and you can then do the assays without a ridiculous cost and actually reliably reproduce what you're doing, so that I think that's been important. In terms of therapy, it's still a little bit difficult because the extracts, actually doing immunotherapy with allergens, using the extracts, often works best and you're using a

lot of different proteins, but different patients are allergic to different proteins, and it is the protein they're exposed to, the mixture.

Dr. Matt Birnholz:
Throughout this conference, I had the chance to connect with food allergy experts regarding the Peanut Addendum to the NIH Food Guidelines, released in January 2017. They also shared insights on risk assessments, patient toolkits, and counseling strategies for parents of peanut-sensitized children and their siblings. Here's what they had to say.

Dr. Amal H. Assa'ad:
This addendum was specifically created for the pediatricians and for the public, to give them a method to prevent peanut allergy, based on research that was done that includes the basis of good research which is a double-blind controlled study that showed that there was benefits in administering peanuts, or peanut protein, to infants, early on in life, who are at risk of becoming peanut allergic and continuing this administration over 5 years' time.

Dr. Sally Joo Bailey:
It was very exciting when the LEAP study came out. The information that showed that we could actually prevent the onset of peanut allergy is something that we didn't imagine would be available. So, these guideline addendums have been helpful because it does give you a generalized pathway of what to do. So, if you're able to identify patients who are at high risk, patients who have severe eczema or an egg allergy, then it's recommended that prior to introducing peanuts, that you should evaluate these patients. So, for instance, something that the general pediatrician or family practitioner could do is that they could either refer them to an allergist or they can run ImmunoCAP-specific peanut IgE to check for those levels.

Dr. Vivian Hernandez-Trujillo:
So, as a parent, and I have children with food allergy, I wish that we had the guidelines present earlier. We've been recommending, up to now, avoidance until later in life; however, the guidelines have changed this and our frame of thought has really significantly changed. This would include whether or not there is eczema and the degree, the severity of the eczema, whether there's egg allergy, or both. And depending on that, the allergist can partner with the pediatrician to perform peanut-specific testing and be able to determine whether an at-home introduction of peanut is safe, or should it be an observed or supervised oral food challenge, or should the child just not be exposed because of their risk.

Dr. Sally Joo Bailey:
Well, change takes time. So, back in December of 2010, it was actually recommended that we eliminate that restriction to avoid highly allergic foods. Unfortunately, it's still lingering. A lot of us still are hesitant about that. One of the things that this addendum does help with, but we have to remember that this LEAP study was just for peanut allergy, and what it does show us is that with peanut allergy, early introduction did help to prevent the onset of peanut allergies.

Dr. Vivian Hernandez-Trujillo:
I do believe there is a significant role that could be played by using component testing to help guide us further to help the families. If we're able to use the component, sputum component testing to help us determine which patients may be more likely to have clinical reactions, that would be very helpful, as opposed to patients who may, in fact, have oral symptoms. That is very important information.

Dr. Matt Birnholz:
This year's conference also marked the introduction of the newly issued Stinging Insect Practice Parameter, which generated a lot of interest and discussion. I caught up with some experts on stinging insect allergies to talk about the key learnings from this practice parameter, the diagnostic steps recommended, and therapeutic guidance for primary care clinicians.

Dr. Jay Portnoy:
Recently, the Joint Task Force on Practice Parameters published a practice guideline on Stinging Insect Allergy. This practice parameter goes through the diagnosis of stinging insect allergy, how to determine whether somebody is at increased risk of anaphylaxis, and what the management should be.

Dr. Lawrence B. Schwartz:
One of the disorders that I treat is called mastocytosis, or systemic mastocytosis, which used to be considered a rare disease, often presenting with a special type of skin rash called urticaria pigmentosa. With the use of tryptase as a screening test, we've begun to uncover a lot of cases of mastocytosis that would not previously have been recognized. And one of the more interesting presenting features for mastocytosis is a severe systemic anaphylactic reaction to an insect sting, in most cases IgE dependent, but perhaps not in all cases. And so, it's become important to look for this disease in people who present with systemic reactions to insect stings.

Dr. Jay Portnoy:
Stinging insect allergy is something you don't want to miss, and it's possible to have a positive in vitro test with a negative skin test.

Patients who are identified as having stinging insect allergy and who are candidates to carry epinephrine and to get venom immunotherapy, we also recommend the patients have a baseline tryptase level measured, because some individuals have an increased number of mast cells, their mast cells are activated so they more easily release their histamine, and if you have an elevated tryptase level as a baseline, you're at increased risk of having a systemic reaction with subsequent insect stings. It also indicates that the immunotherapy should be given longer, and particularly with bee venom, probably indefinitely.

Dr. Lawrence B. Schwartz:
Well, we've known for many years that immunotherapy with venom is life saving for people who are at risk for severe anaphylactic reactions to insect stings. It's better than 95%, 98% effective in reducing that risk dramatically. And once somebody has been identified with mastocytosis, either after they had an insect sting, or even if they had not had a reaction to an insect sting, in our practice, we decided that they're at increased risk for future anaphylactic reactions, and have strongly considered and recommended venom immunotherapy for such patients to protect them against future severe, sometimes life-threatening anaphylactic reactions.

Dr. Jay Portnoy:
Remember, the diagnostic test is really just a way of changing a pre-test probability into a post-test probability. If somebody is stung and they don't have a reaction, the probability that they're going to have anaphylaxis is zero. It doesn't matter what the test shows. If the patient has anaphylaxis, then they have a much higher risk of subsequently having anaphylaxis with future stings. That's where a diagnostic test is helpful, because it allows you to make a clinical decision. So diagnostic testing is critical, but it's important to know how to interpret the results.

If a primary care physician has a patient who comes in with a concern about stinging insect allergy, I always start by asking, "Well, what kind of reaction did you have?" If, on the other hand, the patient reports a systemic reaction, that's local but it's also like skin manifestations at a site other than contiguous to the site of the sting, or GI symptoms, vomiting, nausea, respiratory problems, wheezing, sneezing, that kind of stuff, and certainly, if they get hypotensive, and pass out, that's certainly an indication for further evaluation. Those patients really should be referred to an allergist for further evaluation, and they need to have diagnostic testing performed, and consideration of venom immunotherapy.

Dr. Matt Birnholz:
Thank you for joining us for this collection of expert insights from the American Academy of Allergy, Asthma & Immunology conference in Atlanta, Georgia. To access this and other allergy episodes, visit ReachMD.com, where you can be part of the knowledge. Thanks again.

Narrator:
The preceding program was brought to you by Thermo Fisher Scientific. Thank you for watching. This is ReachMD, be part of the knowledge.