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Diagnosing and Managing Childhood Food Allergies

DIAGNOSING AND MANAGING CHILDHOOD FOOD ALLERGIES

You are listening to ReachMD, The Channel For Medical Professionals. Welcome to Hot Topics in Allergy presented by the American College of Allergy, Asthma, & Immunology. Your host is Dr. Todd A. Mahr, Director of Pediatric Allergy/Immunology at Gundersen Lutheran Medical Center in La Crosse, Wisconsin.

Childhood food allergies are becoming an increasing concern in the United States. Why and what are the best ways to treat children with food allergies. Joining us to discuss diagnosing and managing childhood food allergies is Dr. Scott Sicherer, Associate Professor of Pediatrics and a Researcher at the Jaffe Food Allergy Institute at Mount Sinai School of Medicine in New York.

DR. TODD A. MAHR:

Welcome Dr. Sicherer.

DR. SCOTT SICHERER:

Thank you for inviting me.

DR. TODD A. MAHR:

So the CDC recently released a study that demonstrated an 18% increase in food allergies among American children over about the past decade. Why is this happening? Why are food allergies increasing?

DR. SCOTT SICHERER:

Well, you know, it is great to see that the CDC came out with that information because for many years now, studies that we and others have been doing have been showing an increase and there isn't one quick answer as to why this increase might be happening. The explanation that I have generally given is that we are seeing a general increase in allergic disease. So, you know what are the allergic

diseases, its not just food allergy, but its also things like asthma, allergic rhinitis, or hay fever and also atopic dermatitis or eczema, and so there have been studies showing that all of these different allergic diseases have been on the rise in the past few decades. We have done some studies looking specifically at peanut allergy and we did telephone survey type of study of self-reported peanut allergy. We did the study first in 1997 and repeated the exact same study in 2002, and had for children a report of 1 in 250 with a peanut allergy back in 1997 increasing to 1 in 125 rate doubling when we repeated that just 5 years later and there were studies from the UK with essentially the exact same numbers over the exact period of time. So, you know, one thought is there is just a general increase in allergic disease and the food allergy is part of that increase and it just hadn't really been tracked as well as asthma, eczema, and hay fever. There are also some food specific explanations for this. Peanut allergy has been targeted a lot because it's such a prominent allergy with regard to its severity with the fact that people don't necessarily outgrow a peanut allergy as young children are more likely to outgrow a milk or an egg allergy and so people have asked, you know, is there something about peanut that makes it account for this increase. Are we processing peanut differently, for example? In Asia, they boil or fry their peanuts and they seem to eat almost as much as we do in the US and yet they appear to have less peanut allergy than we do. There might be something in the roasting process or making peanut butter that makes it more easily seen by the immune system, more easy for the immune system to attack it.

DR. TODD A. MAHR:

So, for the general practitioner who is listening, when should they suspect a food allergy? What should be those red flags that go up to make them think, ah, maybe this could be a food?

DR. SCOTT SICHERER:

I think about the suspicion of a food allergy in 2 categories, one is the sudden acute allergic reaction and the second is chronic disease that could be attributed to food allergies. So, let me take the first one I mentioned first. You have an ingestion of a particular food a particular meal and have usually within minutes, usually within 20 minutes, rarely beyond an hour, the classical sudden allergic reaction symptoms affecting the skin or the gut, for example, urticaria high, angioedema occurring soon after a meal, gastrointestinal symptoms, vomiting, diarrhea, breathing symptoms, wheezing, throat tightness, respiratory distress, mouth itch as well and of course if it were anaphylaxis, there could be multiple organ systems affected and of course also the cardiovascular system. So, any of these sudden allergic reactions occurring in proximity to a meal that is going to raise some red flags and probably bring your patients to you thinking that maybe there was a food allergic reaction. You get to ask a lot of questions to try to find what happened. The second category of these chronic diseases that maybe triggered by many different things and may have a long laundry list of differential diagnoses; however, certain classic situations may make you think more about food allergy. So, the biggest one is chronic atopic dermatitis that is moderate-to-severe. So, variety of studies has shown that children with moderate-to-severe atopic dermatitis about a third of those children are going to have a food allergy. There is a bit of controversy as to how much the chronic ingestion of the food may be playing a role because there are many things that trigger eczema and it's usually not just foods, but about a third of the children with atopic dermatitis are found to have food allergy and for many of them removing the appropriate culprit food from diet will help in their skin care management. The second type of chronic complaint that you may attribute to food allergy are the gastrointestinal symptoms and so there are several different varieties of these. Pediatricians are familiar with the breast-fed infant who have mucousy bloody stools and that proctocolitis syndrome is often associated with maternal ingestion of milk. A child may have dramatic form of vomiting and diarrhea either chronically or occurring about 2 hours after the ingestion of a meal and this progressive vomiting, diarrhea leading in many cases to acidosis even and failure to thrive when it is chronically ingested this food protein induced central colitis syndrome is another version of chronic symptoms that could be attributed to food. Another illness that we are seeing more of these days are eosinophilic gastroenteropathies, eosinophilic esophagitis, these are more commonly boys who are presenting around age 10 who often have an allergic disposition already identified, but are experiencing reflux symptoms that are especially characterized by dysphagia, that food may even become impacted in the esophagus and it is associated with eosinophilic inflammation of the gut in the case of eosinophilic esophagitis of the esophagus itself reducing motility. Treatment with antacid medications doesn't really help these children and ultimately diet will resolve dietary changes although it is hard to find the culprit foods, but once they are determined the dietary changes will resolve this for about 95% of the individuals who have an allergic eosinophilic esophagitis. So, these are the 2 general categories with sudden reactions and chronic symptoms.

DR. TODD A. MAHR:

So, let's talk about the sudden reactions for a minute and how to make the diagnosis in those patients, specifically where they have those sudden reactions to foods that present into your office. How do you make that diagnosis of food allergy?

DR. SCOTT SICHERER:

The listener is probably expecting me to start talking about allergy, skin testing, and blood testing, but that's probably the wrong first answer. In fact, I would emphasize that it is the wrong first answer. The history is really the right answer in terms of getting to the heart of was this a food allergic reaction? and if it was, what might be the culprit food. You know, someone is ingesting peanut everyday and then has some hives. You have to ask yourself, I heard the peanut is such a big problem, but see did they really become allergic to it when it has been a solid part of their diet, that prior probability in that scenario makes it actually less likely the peanut would have been a problem. So, he has to say, you know is this even allergy if it's a viral season and other people into the practice are having hives, you know, the family maybe very quick to think that these hives must be from a food whereas you may have the advantage of being able to say, well it looked there was a fever, there was also some sore throat, and these are probably virally-induced hives and maybe have not even go much further thinking about foods, but if there is a reaction with these various symptoms, I mentioned earlier, you really want to try to focus the family or individual on what exactly was eaten, what components of the foods that were eaten, might most likely have triggered this and again that detailed history will be focusing on, you know, what were the side ingredients even of the meal, in some cases, even exercise can make a food that was previously tolerated become more of an allergen, ingesting alcohol with the meal, or having aspirin with the meal might make certain foods that were tolerated before cause an allergic reaction, but most commonly we are trying to do is focus on what were the ingredients and what's new and most of the food allergic reactions are from rather short list of common triggers. So, you have in the back of your mind as a physician, milk, egg, wheat, soy, peanuts, tree nuts, fish and shellfish and some extent seeds as being the most common triggers. If you have a young child, milk, egg, wheat, soy, and peanuts are higher on that list and note if that was the first several times they were ingesting it that's going to go away to the top. If you have an adult who has had sudden allergic reaction, you are going to be wondering perhaps more about some less often used spices, for example, or less commonly ingested foods from that particular meal.

DR. TODD A. MAHR:

So, if you're just tuning in, you are listening to Hot Topics in Allergy on ReachMD, The Channel for Medical Professionals. I am your host, Dr. Todd Mahr and joining me to discuss diagnosing and managing childhood food allergies is Dr. Scott Sicherer, Associate Professor of Pediatrics and a Researcher at the Jaffe Food Allergy Institute at Mount Sinai School of Medicine in New York.

DR. TODD A. MAHR:

So, one of the questions, I think, Scott that would come up would be well, should the provider just challenge that patient to the food in the office?

DR. SCOTT SICHERER:

There are several diagnostic maneuvers that can take place after a careful history and so if you have your potential culprit and you are talking about a sudden allergic reaction, usually the body is making IgE antibody to the specific culprit. So, my first promessage perhaps is to make sure that when you are thinking about testing. So, in the primary care setting, you may not have allergy skin testing, which as an allergist I have available to me. If you feel that you are pretty sure where this reaction stemmed from, you might order a specific IgE to that particular trigger, if you have narrowed it down to a couple of things, you might test for those and if they are positive, it may be

that your careful history with the positive test confirms that that is indeed an allergen and needs to be avoided for that person, and then it brings on management discussions about avoidance and treatment of an allergic reaction. However, sometimes it's not so clear. I would encourage not to do panel testing meaning that sometimes you are faced with a one checkoff box and you get back in a 20 or 30 different foods that are tested for IgE. The test is quite sensitive, but without thinking about the history, it could end up with lots of positives that maybe irrelevant and foods that can be eaten. In other words, this is a person who has sensitization makes IgE to some foods, but can eat it with no clinical problem at all and in atopic individuals, you will often find that type of scenario where they test positive to things that could eat anyway. They really have to put together history with the test results. So, once you have done that, you maybe done, but if you are not done then the other issues that we might bring in for the person with a sudden allergic reaction would be what we call as physician supervised or food challenger feeding test. Now, I think that that's more in the bailiwick of the allergist. What we do in that case is we make sure from the history and the test that we are not quite so certain that the particular culprit food is indeed the culprit and we will see it under supervision, sometimes by hiding the food in another substance so the individual is not scared and biased that they may have some anxiety reactions that are hard to interpret whether the reaction is food or not, so we may "blind the challenge" or even double blind placebo control the feeding test to ensure they were on a level playing fields and then gradually let the person ingest the food under supervision with emergency medications available and see if they actually react or not. If they tolerate it, we make sure that they tolerate a full-size meal portion of the food and its typical form and if they have tolerated that then we have excluded that particular food as a culprit. You may have to look back and say, you know, what other foods were there or was there another explanation.

DR. TODD A. MAHR:

So, you won't get any arguments from me that generally for someone who is food allergic and the provider is thinking this is a food allergy, they may well do a RAST test or ImmunoCAP as you mentioned, but referral to an allergist as he is probably way up on that list of what you should do next to get the expert involved?

DR. SCOTT SICHERER:

You know I might be biased as an allergist to say this and especially as an allergist that specializes in food allergy perhaps, but you know I spend a good hour with patients after a diagnosis is secured to discuss all the management issues and we certainly don't want someone to be avoiding a food that they don't need to avoid. It's a huge lifestyle change and we certainly don't want to send them off thinking that the diagnosis was made and end up that they have a reaction because really the correct trigger food wasn't identified. So, it can be a tricky process and when we are talking about especially life-threatening types of sudden allergic reactions, we want to make sure we got it right.

DR. TODD A. MAHR:

So, generally then for the listeners what would be involved in the management for somebody with those life-threatening type food reactions?

DR. SCOTT SICHERER:

Unfortunately today, we don't have a cure. We are working on that, but in the meantime it's all about education for avoidance, which is multifactorial and for people who have a potentially anaphylactic type of food allergy having self-injectable epinephrine available and understanding how to use and when to use, those are the keys to keeping a person with food allergy safe.

DR. TODD A. MAHR:

What about outgrowing a food allergy, can that occur?

DR. SCOTT SICHERER:

For food such as milk, egg, wheat, and soy for young children, those are typically outgrown and for the most part from studies mostly from a while back, the general statistics that are given are that by school age, by age 5 or 6, above 85% to 90% of the children have outgrown their milk, egg, wheat, or soy allergies. Now, there have been a couple of more recent studies at our referral center showing a much slower rate of resolution of milk and egg allergies and what I just mentioned, but it is a referral center where people with food allergies are being sent. So, that could be somewhat biased, but even within those studies that came out of Johns Hopkins, the message still was that the children, although older, were still outgrowing milk and egg allergy even into the teenage years. So, there is hope. Now, the old story on peanut allergy was a dogma that if you have a peanut allergy, you just have that for life and will not outgrow it. However, there have been quite a number of good studies now showing that at least among younger children under age 2, that 1 in 5 will outgrow their peanut allergy by the time they are school age. So, again, we don't want to close the book on this possible to outgrow a peanut or tree nut or fish or shellfish allergy as well.

DR. TODD A. MAHR:

So, I want to thank my guest, one of the leading experts on food allergy, Dr. Scott Sicherer from Mount Sinai School of Medicine in New York.

Dr. Scott Sicherer, thank you for being our guest this week on Hot Topics in Allergy.

DR. SCOTT SICHERER:

Thanks again for the invitation.

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