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Fighting Food Allergies & Intolerances in GI

Dr. Buch:

Over the last 2 decades, up to 20% of the population in industrialized nations have reported an abnormal physical response to food ingestion, also known as an adverse reaction to food. So what key information do we need to know amid this recent rise around the world?

Welcome to *GI Insights* on ReachMD. I'm your host, Dr. Peter Buch. And joining us today to talk about this increasingly relevant topic is Dr. Frances Onyimba, who's an Assistant Professor of Medicine at the University of Maryland School of Medicine. She's also the lead author of the article titled, "Food Allergies and Intolerances: A Clinical Approach to the Diagnosis and Management of Adverse Reactions to Food," which was published in the journal *Clinical Gastroenterology and Hepatology* 2021.

Dr. Onyimba, welcome to the program.

Dr. Onyimba:

Thanks for having me.

Dr. Buch:

To start us off, Dr. Onyimba, can you tell us why we're experiencing an increase in food allergies these days?

Dr. Onyimba:

That's a good question. I think we're seeing an increase in adverse reaction to foods in general, and that's really just you ingest something, it makes you feel bad or elicit some sort of symptom, and that could be either a food allergy or intolerance, but a lot of the questions have been "Why are we more allergic all of a sudden?" And there's no one answer that explains it all. There are a bunch of theories out there. So some of the theories that most of us have heard about are just the hygiene hypothesis, which is people thought that we were a little too clean and we didn't give our bodies the opportunities to develop the defenses via our immune systems.

There's a thought that the gut microbiome plays a really important role in being able to mount immune responses or dampen immune responses. For instance, we're seeing that there's increased prevalence of food allergies in babies that are born by C-section because theoretically, they don't have exposure or the opportunity to acquire their mother's GI bacteria. So now, rather than being so worried about limiting exposures to things, we now think it's important to have earlier exposure to healthy flora through the mother, to limit exposure to antibiotics very early on that might diminish that flora, and then also to introduce allergens earlier on in life for children.

Dr. Buch:

With that in mind, how should we categorize the type of food allergies or sensitivities?

Dr. Onyimba:

So I like to think of food allergies in three categories. I think most of the time when I think of an allergy, I'm thinking really of an IgE-

mediated immediate allergy like a hypersensitivity reaction where I eat something and then immediately I have hives or wheezing or vomiting, something like that. But in addition to IgE-mediated allergies, you can also have non-IgE-mediated or cellular mechanisms, and then you can have mixed mechanisms. So an example of a non-IgE-mediated food allergy would be like celiac disease where it's a mixed mechanism or eosinophilic esophagitis. And then outside of food allergies in general, there are the food intolerances where it's not truly an immune-mediated response. It might be a chemical response or irritant or poor absorption of some of the molecules in there. But those are kind of the groups that I think of when I'm thinking of a patient with an adverse reaction to food.

Dr. Buch:

And honing in specifically, what are the foods that are most likely to cause food allergies?

Dr. Onyimba:

So 90% of food allergies are caused by just eight foods, and that includes peanuts, tree nuts, soy, wheat, shellfish, finfish, egg, and dairy, and those are the allergens that we're seeing throughout, but largely in childhood since that's historically where we see our food allergies. Some children over time, say by adolescence, develop a natural tolerance to some of the food groups but not all of them. Typically, the peanuts, shellfish, finfish, and tree nut allergies persist into adulthood. And when you look at prevalence data, those are the most common allergies in adults.

Now there are new-onset adult food allergies that happen for patients who never previously have allergies, and the most common one I like to think for the new-onset adult allergies are shellfish.

Dr. Buch:

So let's zero in on diagnostics for a moment, Dr. Onyimba. How do we approach diagnosing food allergies?

Dr. Onyimba:

I think as a community of gastroenterologists we're often the first step for patients. Right? So 50% of patients with food allergies will present with some sort of GI symptom, and our job is to take a very thorough clinical history to characterize the nature of the reaction. For a food allergy diagnosis to be made, the patient has to have reproducible symptoms plus a positive test. So as a clinician, I try to ask the patients: "What are your symptoms?" and "What do you suspect that allergen to be?" "How often and how many times has this happened to you?" "How much do you eat when you notice this happen?" "Is this happening with raw or cooked foods?" "Does it happen if you exercise?" "What's the relationship to alcohol ingestion?" I think really characterizing all of those elements will help to figure out is this truly a food allergy, is there really a high risk of this being a food allergy, or is it more likely to be a food intolerance. I think the immediacy of the symptom onset helps predict is this kind of an IgE-mediated response, like I was talking about before, or something else. The symptoms that for me make me concerned or that are highly suspicious for allergy are hives, swelling, throat tightening, vomiting, wheezing, difficulty breathing, chest pain and a rapid heart rate, or anaphylaxis, low blood pressure, etc. After that, if that history suggests that there's a likelihood of a true allergy, then my job kind of ends, and I refer them to an allergist who takes over.

And there are a lot of different tests on the market, patients can take them from home. The only tests that are really recommended by European guidelines and guidelines here in the US are the allergen-specific IgE test, the skin prick test, and then a supervised oral challenge where you're introducing the allergen in escalating doses and monitoring for a reaction.

Dr. Buch:

For those just tuning in, you're listening to *GI Insights* on ReachMD. I'm Dr. Peter Buch, and I'm speaking with Dr. Frances Onyimba about food allergies and intolerances.

So, Dr. Onyimba, let's continue our discussion by looking at food allergies alongside other GI issues. Can you explain the overlap of food allergies and eosinophilic enteropathy?

Dr. Onyimba:

Yeah. So eosinophilic esophagitis and eosinophilic gastroenteritis is kind of a passion of mine as an esophagologist. When we talk

about EoE and EGE, really we're thinking about the mixed mechanism that I was talking about where you have cellular plus maybe an IgE allergy component to it. And what happens for those is you have an allergen or a food antigen that the patient has been sensitized to at some point, and then the introduction of the food allergen triggers that immune response and leads to eosinophilic infiltration of the gut effectively and then subsequently inflammation. And one of the first-line therapies is removal of the food, same with any food allergy where you just avoid it to avoid that immune response, so in EoE or EGE or avoiding the main food groups that have been identified as food allergens.

Dr. Buch:

And how are food allergies related to irritable bowel syndrome?

Dr. Onyimba:

So I think this is one of the points where it's important to differentiate the food allergies and food intolerances because I think they're used interchangeably a bit, but when we look at the literature and the studies that are out there, food allergies haven't been tied to irritable bowel syndrome as much as the food intolerances. There have been several studies that have been published that looked at the role of food intolerances in irritable bowel syndrome, and the therapy or one of the dietary options for IBS treatment is the low-FODMAP diet. And part of the reason why, again, ties back to that intolerance where the FODMAPs—the fermentable oligo, di, mono and polysaccharides—are poorly absorbed by the GI tract, and then they are fermented and lead to symptoms, such as IBS symptoms, especially with patients who have a diarrhea component of IBS. So studies out there have shown that the low FODMAP diet is beneficial in the management of IBS. And then also they have looked at the role of gluten or wheat starch sensitivity in patients with IBS symptoms. So the gluten-free diet is something that also people use in practice for management of various GI symptoms, functional GI disorders, and potentially irritable bowel syndrome presentations.

Dr. Buch:

Thank you. Before we conclude, Dr. Onyimba, are there any other thoughts you would like to share with our audience today?

Dr. Onyimba:

I think the main highlights when I think of adverse reactions to food, i.e., food allergies and intolerances, is that, yes, they are absolutely increasing in our prevalence studies, and so it's very important for providers to keep that on their radar when a patient comes in complaining of symptoms whenever they eat food, i.e., postprandial symptoms. Two, it can be challenging to tease out the two, but taking a thorough history—we have in the paper kind of listed various points or questions to ask. If our practice can have a standardized questionnaire, I think that also helps to really find those patients that have food allergies versus intolerances.

The other thing to note in the trend in all these studies is a note that three to four times more patients think they have a food allergy than actually have a food allergy and are unnecessarily removing various foods from their diets, which can be harmful when it comes to overall nutritional status. So one thing is, yes, pick up those with true food allergies, but also identify those who are maybe avoiding too many foods who don't actually have food allergies.

Dr. Buch:

Those were some very important insights. And with those in mind, I want to thank my guest, Dr. Frances Onyimba, for an excellent review of food allergies and intolerances. Dr. Onyimba, it was a pleasure having you on the program today.

Dr. Onyimba:

The pleasure was mine. Thank you.

Dr. Buch:

For ReachMD, I'm Dr. Peter Buch. To access this and other episodes in this series, visit ReachMD.com/GIInsights, where you can Be Part of the Knowledge. Thanks for listening and see you next time.