Kendal Williams, MD (Host): Welcome everyone to the Penn Primary Care Podcast. I'm your host, Dr. Kendal Williams. So spring has sprung and everybody has more energy in their step. The robins are out. The sun is shining and trees are blossoming. Flowers are blooming. And so spring is here and while that's a wonderful thing in many ways, it also is that more people are going to be coming in with allergy symptoms. So this was a really a great opportunity to bring on an expert in allergy syndromes to come and talk about some of the things we commonly see. So with me today is Dr. Jume Fadugba, who is the Chief of Allergy and Immunology at Penn and the Program Director for the Fellowship Program.

Dr. Fadugba completed her medical school at Vanderbilt and Residency at Washington University in St. Louis. Then she went back to Vanderbilt for Allergy Fellowship before coming to Penn. Jume, thanks so much for being here.

Olajumoke Fadugba, FAAAAI, MD (Guest): Thank you so much for having me. I'm looking forward to this.

Host: So I have to admit that this was the idea of our cohost, Dr. Tiffany Dharia, who is a Penn Internal Medicine Resident in the Primary Care Track. She went to Penn State undergrad and was a Jefferson Medical Student before coming to Penn for Residency. Tiffany, this was a great idea. I'm glad you recommended it.

Tiffany Dharia, MD (Co-Host): Thank you so much for having me.

Host: And thanks for coming in and co-hosting, I always tell people co-hosting is the hardest job, because you have to figure out when to jump into the conversation. But just jump in anytime.

Okay. So we're going to talk about allergic rhinitis. We're going to talk about urticaria and angioedema and then I wanted to end with anaphylaxis. So those are the more common things I think we think about if something else comes out of the conversation, we'll go down that direction as well. But let's start with allergic rhinitis.

You know, 30% of people will experience allergic rhinitis in their lifetime. Seasonal allergies due to pollen or other environmental triggers is the common cause. Perennial allergic rhinitis is usually due to household dust and pets. Pollen in our area in the Northeast comes from trees in March to May, grasses in June and July, and weeds from August to October.

So it's all throughout the spring and summer season. But has times when it's more intense, 50% of allergic patients will have asthma symptomatology as well. So allergies and asthma come together so often we made a fellowship about it. And you all know, I think if you haven't experienced allergic rhinitis yourself, you know, patients who have, and they come in complaining of runny nose, sneezing, itching, swelling of the nasal mucosa and oropharynx. They may get obstruction of the sinus drainage as well as the eustachian tubes leading to sinusitis and other, other problems.

So, this is a very common thing for us to manage. And Jume, thanks so much for coming to talk about it.

Dr. Fadugba: Oh yeah. Happy to talk about it. It's good timing.

Host: Yeah, the first thing is just, can you help us sort through the the, the pathophysiology here, remind us of what IgE is and mast cells and where leukotrienes fit into all this.

Dr. Fadugba: I'll try without a pen and paper or a blackboard, I'll try my very best. So, when somebody is allergic to something, let's say a Birch tree pollen. What happens is that for a while, they are exposed to Birch tree during spring season without a problem, initially, right? So let's say a kid is exposed to Birch tree every single year during spring. Over time, if that kid is predisposed genetically, and we don't fully understand why, that kid starts making excess amounts of an antibody called IgE that is specific to Birch tree pollen. And that IgE, that that kid makes, binds to mast cells, which are cells that are made in the bone marrow, but they travel to different parts of our body, the skin, the respiratory tract, the GI tract.

That tree pollen specific IgE binds to the mast cells and primes them. We call that sensitization and that eventually one day when they're again exposed to Birch tree pollen during spring, the, the Birch Tree pollen binds to the IgE on those mast cells. And if enough of that allergen binds to enough of the IgE on the surface of the mast cells, the receptor for the IgE enough of those cross link and that triggers the mast cells to degranulate.

And so they release the mast cells throughout the body, release their contents. The, the, best well-known of which is of course histamine. But there are other mediators that are released by mast cells and these include leukotrienes. There are prostaglandins, there are cytokines as well.

So there's lots of things that are released by mast cells. Leukotrienes, we don't talk about near as much, but they are an important mediator. And that is why

sometimes we don't just use anti-histamines, but we will use leukotriene blocking agents as well for people who suffer from allergies. And so depending on the route of exposure, so for example, a tree pollen, typically that's inhaled, right?

And so that will generally reflect the types of symptoms that a person will get. Sneezing, runny nose, stuffy nose, itchy eyes, and maybe even lower respiratory symptoms. Meanwhile, if it's a food, for example, they may get sort of more systemic symptoms because it gets absorbed systemically.

Host: That's great. For those of us who did med school a long time ago, it's really helpful to remember the processes. Because it's really the basis of all the pharmacology, right?

Dr. Fadugba: Absolutely. It's very important to understand that. And it is also why there, the therapies are multi-faceted and with the goal of targeting those various things and then and you know, we'll get to it later maybe, but you can target the end product, the middle product, or the, the early products of, of allergic reactions. And, and so yes, very important to understand.

Host: So most patients who come in with seasonal allergies basically come in and say, I have allergies. They all know they, it's not really a mystery. Right?

Dr. Fadugba: Well, you know what sometimes yes and sometimes no. You know, when we're, if we're still focusing on rhinitis, people know when they have rhinitis and, and yes, you're right. Oftentimes people know when they have allergies, but you'd be surprised particularly in the adult population. And if it's adult onset, a good portion of people's rhinitis is not allergic. And so the history and the testing is always important. And so there are certain signs and symptoms that point towards allergic versus non allergic. And I can usually predict what the outcome of testing will be based on those.

Host: Let's go over this a little bit, because I think, you know, we postnasal drip and rhinitis are, you know, the bread and butter of primary care, but it's a difficult thing to manage, actually. It can be a difficult thing. So I think some of the challenging things are the perennial allergic rhinitis, where patients that are showing up in January with symptoms, right?

Dr. Fadugba: Exactly. Oh yeah. Yeah. So when somebody shows up with the fault, with the following symptoms, you know what, every, every day or most days of the year, particularly during winter I get terrible or with weather change I get terrible postnasal drip, stuffy nose, sinus pain, sinus pressure. I can usually tell there that that is not allergic rhinitis. You know, I still have dust mite allergy

on my radar because of course, dust mites are a perennial allergen, but there are certain sort of aspects of that history that make me think it's likely not allergic rhinitis or what we would call a vasomotor rhinitis. And so the lack of itching, sneezing and ocular symptoms are usually a good predictor of non-allergic rhinitis.

And the presence of pressure, pain, or headache, that type of thing is also quite predictive of vasomotor rhinitis. There's a lot of overlap, of course, because both allergic and non-allergic rhinitis can have congestion and post-nasal drip. But there are certain sort of distinguishing features. And of course, I should also add that some people have both, some people have pollen allergy, they have tree and grass pollen allergy, and they have vasomotor rhinitis.

And it's important to identify those patients too, for the sake of determining what therapies might work best.

Co-Host: Sure. So it seems certainly important to distinguish between allergic and non-allergic rhinitis. Would you be able to go over in a little bit more detail, how you would certainly distinguish both of them and how your treatment might differ for someone who has either or a combined syndrome?

Dr. Fadugba: Yeah, absolutely. So again, there are some symptoms that are predictive of allergic rhinitis, seasonality, presence of itching, whether it's itchy throat, itchy eyes, itchy nose, the presence of sneezing. Those are all predictive of allergic rhinitis. Things that are predictive of vasomotor rhinitis are symptoms that are year round, perhaps worse with dry or cold seasons or with temperature changes. Presence of sinus pressure, sinus pain, things like that. Both forms of rhinitis can present with sinus issues and nasal congestion and post-nasal drip. But those features that I mentioned earlier can help sort of help you predict. Now of course, to confirm, we do allergy testing and what we're doing allergy testing for environmental allergens, we are looking for evidence of IgE to the allergens in question.

And so we can do this two ways. We can do this via skin testing or via blood testing, where we actually measure the level of IgE against let's say tree pollens or grass pollen. So that's sort of the in vivo versus the in vitro assessments. Now, if I do an allergy test, if somebody, the patient is in my clinic, for example, I have the opportunity, my nurse will do the testing we could go into the details of testing later if you'd like, but we essentially prick the skin with extracts, pre-prepared extracts that are manufactured of the various allergens. So all the different tree pollens that are around this area, the Pennsylvania area, the grass, the ragweed, the dust mite, pollen, allergens what else? Cat, dog. Right. If they, if they own pets and then certain the relevant mold. And most of these

molds are actually outdoor molds that people are exposed to.

And if it's positive, they'll have a local wheal at the site of the prick. And then you say, okay, you know what? You're allergic to XYZ, and this is what we need to do. And if it's all negative, we say, hey, you have these symptoms, but you don't have allergic rhinitis, but we can still treat you. So how do we treat them differently?

So I'll start off by saying that the goal of treatment generally of rhinitis is to reduce inflammation. That is the primary goal and both conditions involve inflammation. And so, the therapies will sort of, will aim to, to address that. But if somebody has allergic rhinitis, the first thing we will go over is avoidance measures. Right? And so if somebody has allergies and the allergies are pollens, we talk about ways to reduce exposure. You cannot avoid pollen exposure as long as you're living and leaving your home. And it's important to note that even if somebody is allergic to tree pollen and they have no trees in their backyard, none in their neighborhood, tree pollen travels hundreds of miles.

And so it really, truly is difficult to avoid, but we tell them things like, keep your windows closed in the mornings during spring season, both your car and your home windows. When you come inside after a day outside, have a bath, get that pollen off of you. All those things. If it's cat or dog, we tell them, hey, this is causing problems.

People would never get rid of their pets though. And then talk to them about dust mite avoidance measures, which there are a few things they can do for that. So beyond avoidance then we talk about pharmacotherapy. So both versions, or both kinds of rhinitis respond to nasal corticosteroid and nasal corticosteroid sprays are by far the most effective therapy for rhinitis, including allergic rhinitis. And it is very much under-utilized, underappreciated, and it is even more effective than oral anti-histamines. If one is to choose a single therapy, nasal steroids do more. But many people need more than just one therapy. So, so, so both kinds of rhinitis respond to nasal corticosteroids.

Now, if you don't have allergic rhinitis, you're less likely to respond to oral anti-histamines right. Or you're not likely to respond to oral anti-histamines which target histamine that's released in an allergic situation. There are other therapies for vasomotor rhinitis. Well, truly for both forms of rhinitis called nasal anti-histamines. People often ask, rightly so, why do nasal anti-histamines like azelastine or olopatadine help with nonallergic rhinitis? We don't really understand why, but it does. And so we employ it and it works particularly well for vasomotor rhinitis. And I, we suspect that that, that they have some properties that are independent of a antihistamine properties, perhaps some,

some mild anti-inflammatory or perhaps even vascular affecting properties you could say.

Host: So that actually brings up a question I had, and that is the what we think is the etiology of vasomotor rhinitis. What, what's happening there?

Dr. Fadugba: So we don't fully understand it, but I kind of, when I try to explain it to people, I think of it almost like migraines. You know, how migraines are sort of vascular and neurologic in nature and, and, and actually a lot of the things that, and think of a migraine in the sinuses almost, it's a lot of the things that even trigger migraines actually trigger a vasomotor rhinitis.

They're often very much parallel to each other. So, it's something that is intrinsic, it's an intrinsic problem, as opposed to an extrinsic problem, like allergic rhinitis, but we don't fully understand it. And, and in fact, just to kind of support that there is a very, very, very new surgery that I don't actually know much about, but there's a nerve, I think it's called the viddian nerve that a rhinolaryngologist can target for people with very refractory vasomotor rhinitis. It is without a doubt, more difficult to treat, to manage effectively than allergic rhinitis. And so we do sometimes struggle with these patients. And sometimes the biggest problem for these people is sinus pressure and post-nasal drip.

And so I'll usually go down my list. I'll do the nasal steroid. I'll do the nasal anti-histamine. I'll do the sinus rinses, the saltwater rinses and a lot of times I'm doing all of these things all together. And sometimes I'll do something called a nasal ipratropium, which is an anti-cholinergic, which reduces drainage as well.

Host: You know, the other thing I sometimes think, and of course we're managing these same patients when do you involve ENT to lookup in there and see if the sinus osteo are open, people particularly with chronic congestion and so forth?

Dr. Fadugba: Oh, yeah. So there's a few things. First of all, any patient who is refractory to all the therapies I've said, send them to ENT number one, number two, patients who have like symptoms that are worse on one side versus another consistently, usually so you're looking out for structural issues, right?

And so if somebody has symptoms are almost always on the left side or worse on the left side, then it's a good reason to get a, usually I'll get imaging first, actually, sinus CT without contrast, and then simultaneously make an ENT referral. Other reasons if somebody has a preponderance of nasal congestion, just sometimes I'll even send them to ENT right away.

I mean, the congestion is so great, I'll send them right away. If the patient reports hyposmia so a reduced sense of smell, you're thinking they may have nasal polyposis. Again, get imaging and send them to ENT. And other patients, I guess, patients who have recurrent sinusitis, recurrent sinus infections, I will send them to ENT as well.

And so they're wonderful partners. They will often do the exact same therapies. There's something I haven't done. They'll like, they'll do it. They'll start with medical therapy as well, and try to exhaust that and then determine if they are good candidates for a sinus surgery.

Host: So I want to back, I want to go back and dig back into these medications a little bit, cause we use them so often and I find myself having questions. So let's, let's just talk about nasal steroids. So you use them twice a day, depending on the cause. If somebody has seasonal allergies, they may only need them for the season right. I had a woman ask me today is there any harm to using nasal steroids longer than that? Cause she had more of an, a perennial allergic syndrome, found it to be helpful, but was concerned about using it long-term. What do we know about that?

Dr. Fadugba: Yes. So we encourage our patients, the ones who do have perennial symptoms to use the nasal steroids as long as they need it. So yes, it is safe to use long-term. When I say long-term, I mean, years and years, and I mean, decades and decades, and, you know, we have enough information on patients who have been using nasal corticosteroids. I mean, of course patients always take breaks. They forget it, or things get better. You know, they take breaks during this period, but if used correctly, and the technique is important; it is safe to use long-term and throughout the year. Now there are, there have been questions about risk of cataract formation or increase intraoccular pressure, for example, with nasal corticosteroid use, and there have been some studies that show that some very mild, increased risk and others that have shown none and sort of taken all together, we don't think it's an especially high risk in somebody who's, or at least it's not enough to, to avoid it in somebody who's very symptomatic and who, and especially if somebody doesn't have those conditions to begin with. So hopefully that answers that question for nasal corticosteroids.

And so yeah, we, of course, you know, chronic rhinitis is like, it's a lifelong condition for many people. And so unfortunately people do often need these long-term. Yeah.

Co-Host: A common complaint that I often get is that people don't like the scent or the taste that they get from certain you know, intra-nasal therapies. And so sometimes I'll prescribe the Flonase Sensimist. Is that something that you use

as a go-to agent after proper counseling regarding the, you know, proper technique or do you usually just stick with you know, normal Flonase?

Dr. Fadugba: The one that has the smell that people don't like is actually fluticasone and whoever somebody thought it was a great idea to give it a flowery smell, and some love it, and many don't. So, yeah, you can, you have many options to switch to. So you mentioned Flonase Sensimist, which is also fluticasone, but doesn't really have that smell.

You have mometasone, which is Nasonex, triamcinolone, which is Nasacort. You have, you have other nasal corticosteroids, which are all essentially equally effective and they've never been compared to each other surprisingly, but any of those would work as alternatives. And none of those have that smell. Now nasal anti-histamine azelastine, unfortunately has a sort of bitter taste that you cannot get around. Some people don't mind and some people just hate it. And so for some people it works so well, they don't mind. So you have, you have options.

Host: For the non-sedating anti histamines, so, we all know the drugs, Claritin, Allegra, Zyrtec first off, is there one you prefer? And, dosing is, are there any pearls there that things that we should know about?

Dr. Fadugba: Oh, yes, yes. I would love to share pearls here. So you mentioned three. There's a fourth, that is not as well known, but it came over the counter, it is the last one to come over the counter, but now, it's been many years now, but, levocetirizine, Xyzal XYZAL. Anyway, so yeah. The, these are all great drugs and they are with the exception of loratidine, Claritin are roughly equally effective, although every patient is different, right?

So for some, so loratidine of, of all of those is the least potent, so keep that in mind. But with everything else, I just choose one. Okay. Now cetirizine is probably the most commonly prescribed for a couple of reasons. I have colleagues who think it's probably the most effective but it can be sedating even though it's a non-sedating antihistamine; for a portion of people, I'd say maybe 10 to 15% of people can be sedating.

So keep that in mind. Fexofenadine is a great option. That's Allegra. It is virtually fully non-sedating. And then as I said, levocetirizine or Xyzal, I just tell people to choose whichever one and they all have their different doses. So, you know, Zyrtec is 10 milligrams, Allegra is 180 and, Xyzal is five milligrams, but those are all equivalent to each other.

I really encourage folks to double their dose when needed. You know, people will say, oh, but it says 24 hours. It just says takes one, take one a day. I say to

you, if you need it, if it is your bad allergy season, you can take one tablet twice a day, or you can take two tablets at once. Whichever works for you. So that's one pearl I would, I would certainly sure.

Host: And, you know, so all of these come in a formula that also includes a decongestant, right. Or an add addition of pseudoephedrine, right? So Claritin D, Allegra D and so forth. I think we all know not to use those long-term but when do you employ them?

Dr. Fadugba: Yeah. Well, I, I, I rarely employ them. That's usually a patient comes to me telling me they've been doing it. I'm trying to get them off of it. So, if I have a patient who has a cold or a sinus infection, I need to get them through it for that week, I'll have them do that, but I really very, very rarely will employ a decongestant with an anti-histamine. And for the reasons that we all know. It's not sustainable, but also because if you're using the other stuff the right way, then that's the way to go. So if you're using the nasal corticosteroid the right way or whatever else, then that's the way to go. So I try to like focus on the, the sustainable therapies.

Host: And there's not really much of a role for pseudoephedrine nasal sprays anymore. I mean, they exist, but it just in short term, cold relief or that kind of right?

Dr. Fadugba: Exactly. Like I just used it today, so I can do this talk without sounding too nasally. So I used that for a few days or the oxymetazoline nasal sprays that, that make you feel great very quickly. But very briefly. And as we all know the risk with that is that if you use a too long, you get rebound congestion.

And I've had seen some terrible cases of that rebound congestion or rhinitis medicamentosa, where they've been using, you know, Afrin for years and now their nose is incredibly, or the sinuses are so congested, they can't come off of it. And it's, it's miserable when we, when we try to get them off of it. So, so that's, that's something that, that I try to remind my patients about.

Host: So that's really helpful because we're all using these drugs and getting some pearls from you is very helpful. So let's now take a patient that, you know, has a severe it's just as the allergic triad, they have eczema, they have other things. Or, you know, they're, they're really struggling with their allergies. They come to you. They've tried all these things. They're not really doing well. What are some things that you can offer that the average primary care physician is not doing?

Dr. Fadugba: Yeah. You know, one thing there's a couple of, there are a couple of things. So, you know, primary care doctors all have access to the same medications. Right? I would, I will, I do want to put in a plug, an extra plug in case anybody missed it for saline saltwater rinses. I don't want to forget that. That can be more effective than people realize.

Host: Before you go on Jume, can we, can we go into that? How do you, how do you tell people to do saline nasal rinses?

Dr. Fadugba: Okay. Again, trying to use my words, no pictures. So, saline rinses are what we call irrigation. It's an it's it's, it's what it sounds like. You're irrigating your nose, your sinuses. And so the benefit, why does this work? It works partly just based on the mechanics, right of irrigation and getting junk out, mucus, pollen, things like that.

But of course there's also salt and so, you know, draws out junk as well. And can reduce inflammation. And also by the mechanics can actually reduce the pressure build that occurs in patients who have sort of this baseline vasomotor rhinitis as well. So how do we do it? So what the patient will purchase and there are different ways of doing these. I should say, people know, talk about the neti pot, which is literally a little teapot looking contraption that that has been in use for many years. I actually don't use that so much. I would recommend an upright bottle, right. It's called the most popular brand is Neilmed, N E I L M E D rinse bottle.

And you buy this from any pharmacy, Walmart, Target, Amazon, and it's an eight ounce bottle and you buy and along with that comes salt packets. These, this is not table salt, but salt packets. And you buy a jug of distilled water, a gallon, distilled water. You take that home. You open up the bottle, this eight ounce bottle.

You pour in the water up to the eight ounce, I guess mark, you put in the salt packet. And the close it up. I typically warm it up a little bit in the microwave to make it warm. It's more comfortable that way. Although you can use room temperature as long as it's not winter, it's not freezing. And then you're good to go.

And you lean over your sink. Bend your head forward, lean over your bathroom sink. This bottle, the tip of it, there's a hole, right? For allowing the contents to exit. So you bend down, place the tip against the nostril. Let's say that left nostril first. And you squeeze the bottle. The contents go up and then, up the nose and it come out the other side of the nose.

And so you do that until you're kind of halfway through the bottle and then you blow, blow your nose, blow all the stuff out, and then you switch sides to the other side and you finish the rest of it. And people typically do this once or twice a day. Some people need it every day. Some people need it only PRN. So that can be quite helpful.

Host: I used a Neti pot. I found it really helpful and it's the first timeI'd ever used it. One of my colleagues mentioned it, this was several years ago before I had gone back into primary care and said, you should try this. And I, I went and I bought the a box and there's all this writing on the box. It's actually kind of a funny thing about, you know, celebrating the bounties of the neti pot tonight, but it was actually quite helpful. It really did. I had a very bad cold, and it was really helpful.

Dr. Fadugba: Don't underestimate, it sounds weird. Some people are, I'm going to, I'm afraid. I'm going to drown. People really have an aversion to doing something like that. Right. But once they do it and it works, they love it. And, and, and, you know, I would, I guess one caveat is if somebody has terrible congestion or they have a structural abnormality, sometimes the neti pot is it is miserable for them because it just doesn't do the thing it's supposed to do, it gets stuck, you know, or, or it goes into their ear canal, that type of thing. And so there's exceptions, but for most people it's helpful.

Host: So, Jume, there's a couple of other things you mentioned that you can do that we can't like immunotherapy and of course there's anti-IgE monoclonal antibody therapy. Can you take us through what you would do in those circumstances and how you use those therapies?

Dr. Fadugba: Sure. So the primary one, if we're talking about allergic rhinitis, right? Allergic rhinitis and conjunctivitis, allergen immunotherapy is what we will employ as allergists and really no other I guess, provider would typically do that. Right. And so, the indications for allergen immunotherapy, which is a process to induce desensitization or to induce immune tolerance to the allergen, it's a really cool way of modulating the immune system. We don't fully understand it, but there's all kinds of cytokines and antibodies that are and, and lymphocytes that are involved that I won't go into. But anyway, what happens with immunotherapy is that you administer it's an injectable. It's an injection, sorry underneath the skin of extracts of the allergen that the patient has been found to be positive too.

And when you start off, when you start the injections, you start off at a very low dose, right? Because you don't want to induce anaphylaxis. You're trying to induce tolerance. And so you start off at a really, really tiny dose about one.

One to 10,000 of a full dose. And you know, you inject this and you have the patient come in once or twice a week and you increase the dose in small increments until you get to what's called the maintenance or the full dose after which you start coming in once a month.

And over time, typically within the first nine to 12 months, the patient notices that they tolerate these allergens significantly better or even completely. And so it is a process that does require some commitment from the patient. And there is a small risk, but a very present risk of anywhere from a mild to a severe or anaphylactic reaction with immunotherapy.

And so we employ this when the benefits clearly outweigh the risk, which is of course, if you're still symptomatic with all these therapies. If you don't tolerate therapies or frankly, like if you just want to, some patients will be like, I really want to get a cat. Cats are impossible. They're the kinds of allergens that if you're allergic to it, you're just, you just almost cannot get away from it.

No matter what you do. I hate to tell people that, but it's true. And so if somebody wants to get a cat, allergen immunotherapy is a great option for those patients. Yeah. And, and, you know, the full therapy is three to five years long. After which most patients will have sustained benefit for many, many years after that.

Host: I've had patients who didn't want a cat themselves, but married somebody who had a cat and it became a big issue in terms of how you are going

Dr. Fadugba: I know. And they tell me, I'd rather get rid of him, then get rid of my cat. And I'm like, all right. Enough said, try not to get into those conversations, yes.

Host: Okay. So how about monoclonal antibodies? This is a new thing. I had a patient just recently, she's a friend of a friend and came in and this poor woman had been really suffering with allergic asthma for a long time. She could hardly leave her house. She was quite elderly and it really had made her homebound completely.

And she'd really never had an opportunity to get any of these advanced therapies. And so I sent her to an allergist and she is being started on omalizumab. So maybe you could tell us a little bit about that.

Dr. Fadugba: Sorry, I missed this Kendal. What was the patient's condition?

Host: She had severe allergies.

Dr. Fadugba: allergies? Okay. Yeah.

Host: She wasn't even able

Dr. Fadugba: Not asthma?

Host: Yes. With asthma as well. Yes. Yes she did have, she had both.

Dr. Fadugba: Yeah. So omalizumab, as you said, is a, is a monoclonal antibody that targets IgE, which, which is a central player in allergic conditions. So it is approved. It is FDA approved for treatment of allergic asthma and chronic urticaria. And most recently, chronic sinusitis. It is not approved for treatment of allergic rhinitis alone. And so although it has been found to help. And so we employ omalizumab or I will in somebody who has asthma that is inadequately controlled and that has allergic triggers. So these patients will have to have positive allergy testing and, and it can be extremely effective for, for this.

And so these are patients who are not responding for example, to high dose inhaled corticosteroids and long acting beta agonists, or who require oral steroids very frequently. Omalizumab can be very effective. It's a, it's an subcutaneous injection every two or four weeks. And it's weight-based.

Host: So I know that doesn't necessarily flow from our allergic rhinitis discussion, but you know, we have some patients that are, you know, have both. Right. And because 50% of allergic patients also have some asthma symptomatology, this lady had severe asthma symptomatology, but it was triggered by her allergy syndrome.

Dr. Fadugba: Exactly. Exactly. So it is very helpful for those kinds of patients. Omalizumab has made a big difference in, in how we manage those patients. And I should add here that omalizumab was the first for that indication, but now there are 1, 2, 3, there are six monoclonal antibodies for people who have severe asthma, allergic asthma or eosinophilic asthma.

Co-Host: How high is allergic asthma on your differential, when you see a new adult who's coming in with new onset asthma?

Dr. Fadugba: Oh, that's a great question. So, you know, there are in recent years, in the past decade or decade and a half, we've learned much more about asthma and that asthma is not just one single entity, but it's really an entity with many different phenotypes. And so we all know about the allergic asthmatic, the

kid who had asthma or the person who had asthma as a kid, and they didn't really outgrow it, or they did. And it came back and it's worse during certain seasons, so on and so forth. But yeah, we see in my clinic, a lot of patients who don't have that story, they developed or were diagnosed with asthma when they were 45 years old after they had having terrible attacks going to the hospital. They're often overweight or obese. Not necessarily smokers and you know, no significant smoking history. And so in those patients, I will always search for allergic trigger because of many reasons, somebody may present later in life, but, those patients are less likely to have allergic asthma. And those of course are also the patients who are a bit more difficult to, to manage successfully.

So, so that's, that's something to keep in mind and, and it's not, while allergic asthma has a lot of overlap with eosinophilic asthma, there are some patients who don't really have allergies, but they do have eosinophilic asthma and they still benefit from certain monoclonal antibody therapies.

Co-Host: Is there ever a time when you would suggest someone go see pulmonology for their asthma over allergy and immunology or vice versa?

Dr. Fadugba: Yeah. So so asthma is one of it is the condition that both pulmonologists and allergists handle and treat. So I can talk a little bit about at least our experience at Penn. An allergist is trained to treat asthma. It is one of our core, I guess, conditions that we treat, that we're trained in both allergic and non-allergic. I want to, I'd like to add and, and many pulmonologists are as well. Now, depending on the institution, so the pulmonologists also specialize in many other pulmonary conditions. If that makes sense. And so not all pulmonologists necessarily will considered them, will themselves asthma specialists, although many or most will.

So usually either is fine. I will say though. So usually either a pulmonologist or an allergist would be fine to send a patient to, if you have a strong suspicion for a patient, has a history of allergic asthma, then then maybe send them to an allergist because then they can do testing and they can, they can do allergy shots if needed or things like that.

If the patient may benefit from a monoclonal antibody therapy, out of the six that are currently exist, all of which actually really mainly the TH2 asthma, right? The IgE and eosinophilic asthma, then send them to an allergist. We send patients to pulmonologists, not infrequently though, particularly in patients who are just not responding.

And you're like, wait a second. Is this all asthma? So they may not always have asthma. They may have several other conditions and our pulmonologists can

really help us with that. Or if they have comorbid respiratory conditions like asthma, as well as COPD for example, then we'd send them to pulmonology.

Host: So, I don't think we're going to have time for urticaria, but I do want to cover just anaphylaxis a little bit because here's the common scenario that at least I face in primary care, a patient has had some anaphylactoid event, was given an EpiPen. Saw an allergist at one point and now has moved into the area, still carries this EpiPen and now wants me to renew it. And so this is a common thing. It's happened to me several times. And of course there's been some changing in the cost of EpiPens, and then they've changed some of the dosing and it's all very confusing. So for that scenario, Jume, can you just help us out? Like what should we be doing with these EpiPens?

Dr. Fadugba: Okay with the EpiPen itself. So, well, a patient who has had a history of anaphylaxis and whatever that trigger of anaphylaxis is, if it's still something, if it's something they can still be exposed to in future, often accidentally, then yes, go ahead and refill. You know, the auto-injectable epinephrine, I don't like to call them EpiPen because that is a specific brand name. And there are many others now, thankfully as you're talking about, that cost and, and competition, but so yeah, so with the auto-injectable epinephrine is we'll re we'll refill them as long as they need them.

There is a, an expiration date on there, but I tell people, look, actually it is still and the studies have shown a study, not too long ago, showed that they are still effective or at least 90% effective five years later. So if a patient is struggling or can't afford it, I, you know, I keep it, you know, I tell them to keep an eye, use it if they need it.

Typically the worst that will happen is that we'll have lower efficacy, which is obviously not ideal, but the EpiPens or the auto-injectable epinephrine, there are several now. So sometime ago when there was all this controversy, though, there was only one, the EpiPen at that time, one of the other one had gone had undergone a recall, tons of things were happening, but now there are about five or so different brands that are available, which is great for patients.

Host: What, what dose, how do you prescribe it? If you write the order, what do you write?

Dr. Fadugba: Yeah. It's 0.3 milligrams is the standard dose for an adult, 0.3 milligrams is pretty much a standard universal dose. And so all of the auto-injectable epinephrines are 0.3. Now small children do 0.15 milligrams, or it's really 0.01 mgs per kg.

There is evidence that obese patients are significantly obese patients probably don't get enough epi of course with the 0.3 milligrams. And so you always, always have to carry two epis with you at all times for that reason, but also in case your symptoms don't go away after the first injection or in the unlikely event that you experience rebound anaphylaxis or sort of second phase anaphylaxis which occurs rarely.

Host: So, this has been a great discussion. We're coming to the end of our time. And as we always do, we, we ask you, what are the things you want to tell the Primary Care community? So Jume, I'll start with you. What are some of the things that maybe you want us to know so that, you know, we do these things well, before we have to ever get to you.

Dr. Fadugba: Well, first of all, Kendal, I would say thank you for taking care of our patients so well, and I think knowing when to send patients to the allergist can be very difficult, but we are always happy to see these patients, particularly the patients who are struggling with difficulty identifying their allergens or patients who have chronic urticaria. That's a big one. I think patients probably suffer with that longer than they need to, and it can be difficult to manage. And so you know, to our Primary Care colleagues at Penn where we're open, even with this for a discussion, but we're always happy to see your patients.

Host: How about you, Tiffany? Any takeaways?

Co-Host: Sure. You know, as someone who has undergone immunotherapy and has been successfully desensitized to a bunch of things, including cats I know a lot of my patients are often deterred by the length of therapy that you would sometimes need for immunotherapy. And I think something that I really do advocate for my patients who really suffer from terrible allergies is to see an allergist and just go over and discuss your options.

I think it really does make a difference in helping them understand the other alternate therapies that exist and that there could be a different possible solution that would make, you know, certain seasons, a little bit less miserable for them.

Host: Thank you, Tiffany. Thank you Jume for, for joining us. It was an excellent discussion. I know I took away some pearls. I hope that others in the primary care community have. And, and if you did please join us again next time.

Announcer: Please note that this podcast is for educational purposes only. For

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