Dr. Mariam Hanna
Hello, I'm Dr. Mariam Hanna and this is The Allergist, a show that separates myth from medicine, deciphering allergies and understanding the immune system. There's this common story I'm really sure you've heard about where three blind people are holding on to an elephant, each describing the part of the elephant that they're holding on to, and their descriptions kind of make no sense until they start speaking together and discover that it's an elephant. I can't help but feel this way sometimes as we work through different respiratory diagnoses.

Take my patient, two ICU stays for asthma exacerbations, one of which precipitated by his sinus surgery for nasal polyps. He has chronic sinusitis and his polyps have recurred. Asthma is okay right now, so he comes to see me because it must be allergies, right?

Well, he's actually not allergic to anything I could find, so it's either local allergic rhinitis or just bad disease. And we're left essentially like these three blind people holding on to different parts of the elephant that's in the room. The otolaryngologist recommends repeat surgery because that's his issue, and it's recurred and there's a unified airway.

I recommend a biologic because, you know, that's my fancy new thing that I get to recommend. And there's this unifying immunologic process. And so far, resp hasn't weighed in yet because, well, he essentially doesn't get into trouble other than one epic exacerbation every single year in this guy.

So I'm sure we could do a better job with chronic sinusitis, but it's mysterious to me what the right answer is. And a couple of years ago when I would hear about sinus disease and how we manage it, like they were talking about maybe introducing probiotics into the sinus cavity, and my recent post-op patient did not come back with probiotics. He came back with iodine mixed into his saline rinses that were going inside his nose.

And so while sometimes I think we're working all towards the same path, there's this giant elephant in the room about the management of chronic sinusitis still is mysterious, and our patients are left challenged and bouncing around between specialists still trying to work through this problem. Which is why I'm actually excited to speak to another otolaryngologist, a specialist, to talk to us about managing chronic sinusitis and really getting to the bottom of this disease. Today, we're joined by Dr. Andrew Thamboo, one of British Columbia's busiest rhinologists and a leading expert in chronic sinus disease. After completing a prestigious rhinology and skull base fellowship at Stanford, he returned to UBC, where he now leads research at St. Paul's Sinus Center. His work explores the unified airway hypothesis, chronic sinus inflammation, and how personalized medicine can transform outcomes for patients with complex sinus conditions. From innovative treatments to cutting-edge research, Dr. Thamboo is helping redefine how we understand and manage sinusitis. Dr. Thamboo, thank you so much for joining us, and welcome to the podcast.

Dr. Andrew Thamboo
This is awesome, Mariam. I love that introduction.

Dr. Mariam Hanna
Okay, so we're going to start with the basics. How do we get to the definition of chronic rhinosinusitis, and what distinguishes this, obviously, from its counterpart, acute sinusitis?

Dr. Andrew Thamboo
Okay, so we'll go through some of the simple things. So, chronic rhinosinusitis is a condition that lasts longer than 12 weeks. And we have a simple acronym in our world of sinus surgeons called PODS, pain, obstruction, discharge, and a loss of smell.

And you kind of have to have symptoms of obstruction and discharge, and one of those other symptoms. So, if you have two out of the four, you have the symptoms, but you need to have objective findings. So, that's CT scan or endoscopy.

So, if you have something on evidence, objectively, that you have this type of inflammation with the subjective symptoms, you've got chronic sinus disease if it lasts longer than 12 weeks. Now, with acute sinusitis, there's a little different than the typical patient that a family doctor usually sees, and it's usually a symptom that lasts less than four weeks, has similar symptoms like pain, obstruction, discharge, and a loss of smell, but they can have fevers.

They can have more of that thick yellow discharge, but it's more of a time-based issue, and it's less than four weeks.

Dr. Mariam Hanna
And they love describing the color of the discharge. Please don't tell me.

I don't want to know. Can we elaborate on that diagnostic criteria for with or without nasal polyps? Is it just a matter of you see nasal polyps or you don't?

Dr. Andrew Thamboo
Yeah, I mean, obviously, sinus disease is a spectrum, right? And obviously, when you look in someone's nose, sometimes you actually don't see polyps, but they have that type of inflammation. So, yeah, really, it's an objective finding of putting something in the nose.

It can be anterior rhinoscopy. It can be an otoscope. It can be an endoscope that we have in our hands, and we see polyps, and we can define that this individual has polyp disease.

But to be honest, I think things are evolving. I think what we used to just call black and white, no polyps, and people with polyps, we're realizing we're more or less describing people with type 2 disease and non-type 2 disease and everything in between. And I think this is where this whole subject is getting way more complicated, right?

Like, even within our own field of ENT, like when I was training, it was just polyps or no polyps. But now, it's more like type 2 and non-type 2. And that's what I look at it now.

I don't think about it as polyps or no polyps.

Dr. Mariam Hanna
Perfect. So, represents an evolution and increased learning on the topic. Okay, common risk factors for comorbidities associated with chronic rhinosinusitis.

Dr. Andrew Thamboo
Oh, so, you know, Mariam, I love unified area disease. It's everybody with polyp disease, usually, or a big chunk of them, 60% plus around there, will have asthma. So, that's a big one, right?

So, type 2 inflammation is associated with polyp disease, and obviously, type 2 inflammation leads into asthma. And so, other type 2 inflammatory disorders. So, you think of like atopic dermatitis.

So, we see patients with that. I even see patients with inflammatory bowel issues, right? So, generally, inflammatory mucosal diseases can be present in other organs as well.

And I think it's really important, anybody who's managing lungs or sinuses or any other type 2 inflammations, talking about other organs as well, just so you can realize the degree of severity.

Dr. Mariam Hanna
That makes sense. And does degree of severity of one condition tend to correlate with other, like having poor control on other parts?

Dr. Andrew Thamboo
Not in general, to be honest. Someone can have really bad nose and a really great lungs or vice versa. So, I don't think it's a one-to-one ratio.

But I think when you start to see people with a bad nose, a bad lungs, a bad skin, you're saying, okay, this person needs help ASAP.

Dr. Mariam Hanna
Understood. And what key elements should clinicians be focusing on during history taking and physical exams?

Dr. Andrew Thamboo
Yeah, besides the symptoms, the time frame, the other things that I'd like to know is the response to treatment. So, simple responses to treatment indicate whether it is truly that disease, or they do have that disease and it should potentially respond, but the disease severity is so high that the medical management doesn't work enough. So, I think, for example, we love palmicort saline irrigation.

We love putting the palmicort into a saline bottle. We love throwing it up the nose.

Dr. Mariam Hanna
That's the other thing that goes in the bottle. I was going after elaborate. Yes, of course, of course.

Dr. Andrew Thamboo
And, you know, even if it sounds simple, it's great because it gets great distribution of topical steroids to the nose and majority of patients resolve from it. It decreases inflammation. It takes away the nidus, whether that's allergens, viruses, whatever, out of the nose.

And most people do well. If most family physicians did this management, I bet you majority of patients could resolve a lot of the treatment problems. Because I think nasal steroids in general just don't have enough good distribution.

So, say if a patient fails on that, my job is then to figure out is their disease just so severe we're not getting over it and that's where we need to progress to more of an aggressive management or we just got the wrong treatment plan. And the other treatment plan beyond type 2 inflammation is non-type 2 inflammation. And that's where I guess I'm thinking about for us is the macrolide treatment, which is very similar in the respirology world about the non-type 2 management plan.

I'm starting to look at the person who is a little bit older. The tissues look a little bit different for the typical patient that has type 2 disease. I'm looking for other factors that may make me think of other treatment options.

Dr. Mariam Hanna
Okay, and before we get to treatment options, sometimes to speak to a specialist, I don't know if this happens in your area, but you can't get in the door without a CT scan. So, what I'd like to ask is who particularly requires a CT scan to aid in their diagnosis of chronic rhinosinusitis?

Dr. Andrew Thamboo
If they have symptoms beyond nasal obstruction. So, if they're saying, I feel congested. I got a lot of thick discharge.

I've got a lot of facial pain and pressure. I've got a loss of smell. I think the things beyond, I just can't breathe out of my right side of my nostril.

Those people should get a CT scan because at the end of the day, I could put a camera in someone's nose and they have those symptoms and they're like, do I have sinus disease? I'm like, I don't know. I gotta get a CT scan.

So, I think that's why people need a CT scan before they get seen.

Dr. Mariam Hanna
Okay, fair enough. And if the otolaryngologist...

Dr. Andrew Thamboo
Does that frustrate you?

Dr. Mariam Hanna
No, no, no, no. That is fine. I mean, it is what it is.

I just, I wanted to know that that was the fair route, but clearly evidence-based.

Dr. Andrew Thamboo
And it's a cost-effective way, to be honest. Yeah, evidence-based.

Dr. Mariam Hanna
And cost-effective. Oh my goodness, my ears. Okay, all right, fine.

But you're just also telling me that an otolaryngologist can look up with that scope and still have a hard time evaluating without that CT scan.

Dr. Andrew Thamboo
You know why? Because chronic sinus disease without nasal polyposis, you don't see the polyps. You don't see those findings.

So, you're like, okay, this patient's complaining of discharge, congestion, pressure, but is that a nasal problem or purely also including a sinus nasal problem? So, we have to use a CT scan to help us with that diagnosis.

Dr. Mariam Hanna
All right, you're making the case. Fine, I'll move on. The guidelines also suggest allergy testing.

Again, can't knock my own specialty. Allergy testing and immunologic evaluations. Who needs an allergist?

I mean, probably you should tell me everyone. However, in which patient populations are these assessments like the most beneficial?

Dr. Andrew Thamboo
You know, it's all history. History drives the decision-making for that intervention, especially at least for me as a rhinologist. If they're showing a history of like seasonal changes, when I look inside their nose, I see like more congestion.

You know, obviously, there's particular findings that we see on endoscopy and CT scan that illustrates something called central compartment atopic disease. So, we see all the disease

centrally. So, on endoscopy, if I see it all on the middle turbinate, the septum, maybe in the inferior turbinate, and it's all congested and polyploid in nature, that's okay.

This is more of an allergen, aeroallergen issue. If it was on the CT scan where I see all the disease in the central part of the sinuses, but sparing the mastoid sinus and frontal sinus, I'm like, okay, more central disease. You need to go see Mariam and get your allergies done because you might need immunotherapy.

So, yeah.

Dr. Mariam Hanna
Okay. So, you can differentiate it from pattern recognition and again from history elucidating that. Take a step back for me.

What about in pediatrics? Every single parent that comes and sees me believes that their child has also chronic sinusitis, but they have recurrent respiratory illnesses. Is there a role for imaging in these guys?

Dr. Andrew Thamboo
Obviously, we're more careful about imaging in children. One of the easiest things is still putting a camera in someone's nose, but more importantly, into their adenoids, right? So, the most common cause for chronic sinus disease symptoms and findings is adenoiditis.

So, the first line of treatment, to be honest, for most people with chronic sinus disease symptoms is getting an adenoidectomy because that usually harbors a lot of bacteria and it's a cause of a lot of the chronic sinus disease. However, things are changing. There's been a slow shift towards more aggressive treatments, right?

I'm seeing more and more pediatrician ENTs perform sinus surgery. I think they're also finding people with more sinus disease. So, I know it'd be interested to have this conversation with you in 5-10 years.

I can see us doing more sinus surgery on those people because I've been called up more often than not in the last few years to do sinus surgery on people less than 18.

Dr. Mariam Hanna
That's interesting, and yes, it's interesting to see these patterns as they are slowly shifting. Okay, first-line therapies for traditional chronic rhinosinusitis. Let's go through pharmacologic and non-pharmacologic options.

You've already told me nasosteroids would be nice, but penetration efficacy may not be as great, even though I teach them, Dr. Thambooo. I keep telling them, away from the septum, up to your ear, tilt down. You know how many minutes I spend on each one of those prescriptions?

Please tell me, what are pharmacologic and non-pharmacologic options? I'll stop right now about this.

Dr. Andrew Thamboo
I love that. I love that you do that. I mean, most people don't do that.

Even most ENTs don't do that. So, I think that's great that you're doing that. First, pharmacological.

Dr. Mariam Hanna
Are you going to tell me it makes no difference? Because that will upset me.

Dr. Andrew Thamboo
No, it does. It does. It does.

It does. It does. I promise you.

I do say that nasosteroids is like fairy dust. I do like the antihistamine-nasosteroid combination. I think we don't have that.

But I think a baseline treatment is saline plus nasosteroids together. I think there is a reason for that in both people with polyps and no polyps, that it just addresses the inflammation, has great distribution. A lot of great cadaver studies have shown way better drug distribution in putting the steroid into the saline wash bottle, which is, I think, is why all ENTs use it now.

Obviously, the nice thing about nasosteroid sprays is that it's easy to access. It's way more affordable. A lot of different drug options.

Good coverage. But I save those drugs mostly for people with disease in the front of their nose. So, if they've got allergy-driven disease, like where it tends to be in the inferior turbinates, maybe the head of the middle turbinates.

I think that that drug is fine. And I think giving a steroid spray is sufficient enough. And I think that's why it works in general medical practice.

Now, my choice around those drugs is, if I'm doing that, I'd rather give an antihistamine plus a steroid combination drug. So, now, that's like baseline. Everybody gets that.

And then, in people with polyps, our guidelines will say plus minus oral steroids. But we all know that oral steroids are naughty now, right? And we're all trying to get away from it. And it's faux pas.

Dr. Mariam Hanna
It’s a bad word

Dr. Andrew Thamboo
I'll do a plug right now that we are doing guidelines internationally on how to better use oral corticosteroids in the setting of nasal polyps. So, that should be out at the end of this year or early next 2026. So, international consensus paper on that.

The other plus minus is antibiotics, right? But we all, again, similar thing to oral corticosteroids. It's overused.

It doesn't work on majority of patients with an inflammatory disorder. So, the key part is which patients to use it on, right? And we all talk about that whole macrolide therapy using clarithromycin or azithromycin to dealing with a non-type 2 inflammation.

But it's hard to identify who that is. Luckily, in our practices, we can take a piece of tissue and look at the pathology, right? And that's easy, right?

We can say, okay, hey, pathologist, what do you see? They're like, oh, we see a bunch of neutrophils and we see a little bit of eosinophils. Okay, by accident, it is.

Or azithromycin, it is. So, I think my general take-home message to most people is oral corticosteroids and antibiotics just generally don't work unless you have a good indication for it. You've got to have a real good indication for it and have a real good comfortable understanding of the mechanism of actions, the pathophysiology of what you're seeing.

And then, to be honest, I love working with allergists. I'm a big believer in the immune system. And this is not a sellout because I'm with you, Mariam.

I honestly run a clinic with the allergist right across the hallway. And I see it with my patients. You know, what the allergist can provide beyond immunotherapy is looking at the other different causes of sinus issues.

You guys look at immunology in a different way. You guys look at their immune system. You look at immunoglobulins.

You look at their titers for reason for vaccinations. Those are things that are so important to controlling the inflammation that you guys are so good at that we honestly just don't do well. So, I think working with your allergist for those things are so important.

Dr. Mariam Hanna
See, it's like those three people that were looking at the elephant in the room. That's what it's supposed to be like. Okay.

Now, understanding that you are also a surgeon, when should surgical interventions be considered?

Dr. Andrew Thamboo
Yeah. So, we say appropriate medical therapy. So, if someone's come to me with sinus issues, and we say, have they received appropriate medical therapy?

We actually historically used to say maximal medical therapy because we used to follow guidelines that would say nasal steroids, saline washes, do your oral corticosteroids, do your antibiotics, do everything, throw the kitchen sink at them. But we realized throwing the kitchen sink is not actually a healthy thing for the patient. So, appropriately giving them the maximal medical therapy, appropriate medical therapy, pardon me, of whatever it's appropriate, and then saying, okay, hey patient, do you feel better?

Do you need more? And based on their CT scan findings, if it shows sinus disease despite medical therapy, say, okay, here are your options, and you present it to the patient.

Dr. Mariam Hanna
And is there a duration for appropriate medical therapy, given it's a chronic condition?

Dr. Andrew Thamboo
Yeah, three months. At least three months, I would say.

Dr. Mariam Hanna
Three months. Okay, fair enough.

Dr. Andrew Thamboo
Honestly, in our healthcare system, we do more. We're going to give them six months or something like that, right?

Dr. Mariam Hanna
Well, by the time they're waiting for the CT scan and the consultation with the specialist. Okay, so three months, and you're starting the process. Okay.

How do you approach patients that have failed standard therapies? Any of these alternative therapies? I was so curious when I heard about this probiotic up the nose or whatever else going up the nose.

What are these alternative treatments all about, and do they actually hold any weight?

Dr. Andrew Thamboo
I mean, there's so many. I'm going to be honest, when I was a resident, I did a lot of research on manuka honey. I think they all have some kind of role, like something.

Manuka honey was antibacterial, anti-fungal, anti-inflammatory. It was the hot stuff. I remember people in Australia studying it, especially the people in Australia and New Zealand, because that's where they produce the manuka honey.

I think they all have some role. Whether they have a global population role is the million-dollar question, and that's why they don't. That's why we don't use it standardly.

But I think if you take the patient as an individual in a personalized care, they may have a role, and understanding what each of these drugs do helps. So, for example, xylitol sugar, a natural product. You get it from Whole Foods.

It's in gum. What's so great about it, it takes thick mucus and thins it out. So, if you see a patient who has really thick mucus, and you want to give them something natural, here, take some xylitol, put it in your saline bottle, and there you go.

If you've got another patient who comes in with crusting, and they complain that every time I blow my nose, I've got these massive crusts that come out of my nose. Okay, maybe they've got a biofilm issue. Well, your options include putting a probiotic up the nose.

Maybe it's a biofilm issue where there's just a different bug that's overgrown. Maybe it's putting iodine up the nose. So, understanding those symptoms and the options allow you to be more targeted with your therapies.

Maybe it's a smell issue. Okay, now we're talking about olfactory training, and not just talking about surgery. We're talking about other things that can help.

So, yeah, I think it's all about finding the symptom and targeting it thereafter with these treatment options.

Dr. Mariam Hanna
That is awesome. And, like, such a highlight of patient-centered care and such a holistic approach you have offered us, Dr. Thamboo. That's awesome.

Okay, looking ahead, what advancements in diagnostic tools or treatment modalities that you anticipate will significantly impact chronic rhinosinusitis management?

Dr. Andrew Thamboo
Yeah, it's going to be personalized care. I think that is definitely where it's going. I think I've heard this word since 2009 when I started doing research.

It's like, we're doing personalized care. I'm like, okay. So, I see it rolling.

I see it getting better. The type of science that is available compared to what it was back in 2009 has evolved dramatically. The issue is cost, right?

So, we're trying to figure out ways where it's not just can be done at the lab bench standpoint. It can be done at a simple standpoint. I think there are ways to get around that.

And, the reality is, biologics becoming cheaper, right? Biosimilars are coming to Canada. They're being presented to us now.

And, the reason why we have management plans the way they are is because we're trying to be cost effective. And, we have to realize and appreciate that we are going to change the way we provide care based on what's more cost effective. So, as we do more research and figuring out which of these biosimilars produce and give the outcomes that are similar to the current biologics that are out there, you're going to see a shift in care.

A massive shift in care. And, it's going to be questions, where does surgery fit? Where does this biosimilar fit?

And, etc.

Dr. Mariam Hanna
Sounds like an exciting time, particularly for my patients, where I keep saying, you go to the plumber, you'll hear about plumbing. You go to the electrician, you'll hear your electrical, right? But, this will change things.

All right. Time to wrap up and ask today's otolaryngologist, Dr. Andrew Thamboo, for his top three key messages to impart to patients and physicians on today's topic, chronic sinusitis. Dr. Thamboo, over to you.

Dr. Andrew Thamboo
The top three things that I care about and think that patients and physicians should be aware of that chronic disease sucks. It's not aware. People know that asthma sucks.

They don’t know that sinus disease sucks. It really impacts people's quality of life. It impacts their function.

It needs to be taken very seriously. And, it contributes to lung function. So, managing and taking care of chronic disease is highly important.

Number two, currently cost-effectively sinus surgery is awesome. In the current healthcare systems that we are in now, biologics are expensive. And, there's still, I'm still a big believer that sinus surgery, done well, done appropriately, and done completely, helps a majority of patients.

But, the third thing I'd like to say is that the future is changing. And, it's really important that not only physicians, but patients are well aware of the changing landscape. And, that we evolve with it, willing to look at the evidence and change.

And, I do think, like I just mentioned at the end, that biologics will become cheaper. I think biosimilars are coming down the pipeline. And, we have to work and figure out how those work together, surgery and biologics.

I actually think, as a result, the goalpost is changing. Before, it was just symptom improvement. Now, it's going to be symptom improvement and inflammatory disease improvement.

Because, we're realizing that inflammation is terrible for us. And, we don't want to just have symptom improvement, but we want to have general inflammation improvement, which will improve our longevity. So, there you go.

Dr. Mariam Hanna
Fantastic.

Dr. Andrew Thamboo
Top three.

Dr. Mariam Hanna
Perfect. Thank you, Dr. Thamboo, for joining us on today's episode of The Allergist.

Dr. Andrew Thamboo
Thanks, Mariam. This was a lot of fun.

Dr. Mariam Hanna
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Leave a review and a five-star rating. It helps others find the show. And remember, sinus disease sucks.

Thanks for listening. Sincerely, The Allergist.