Histamine, Inflammation, And Lyme: How Your Immune System Could Be Working Against You Transcript

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Introduction and guest background

Hello everyone. My name is Doctor Richard Horowitz. I am the co-host of the Doctor Talk Healing Lyme Summit 2.0. It is my great pleasure to introduce a longtime friend and colleague.

Wonderful doctor. Please, Tanya, thank you for joining us today, doctor Tanya Dempsey. We're going to speak about the importance of mast cell activation and ways of treating mast cells in the complicated Lyme patients.

So Tanya, thanks for joining us. Thank you for having me. Yeah. So why don't you tell people a little bit about how you got into this? Because every doctor has another story of how they entered the Lyme world.

How did you get involved in all of this? Well, I think I have to thank you. Okay. I was somehow responsible for what's going. Oh. Oh, yeah. Yeah, I oh, I hold you completely responsible.

You know, I was doing, you know, I started my career doing internal medicine and then realized, you know, very quickly that, you know, just doing street medicine without understanding root cause and connections in the body wasn't working.

I started my integrative practice and very early into starting my integrative practice around 2011. I, somewhere maybe I don't think I think it was like 2012, 2013.

I, was speaking at a conference that you were speaking at as well. And, you know, my first practice was opened in, in, in Armonk, New York, which is in Westchester County, which is an endemic region of, of New York.

And, and I didn't really realize it, you know, which is kind of crazy. So I was seeing patients or complex. I'm trying to figure them out. And, and I heard your talk and and what I think is really interesting about it was I, my mother was at that at that talk with me.

And throughout the entire talk, I don't know if you know the story, but like, you know. Truthfully, this is the first time I'm hearing it, but I know your Russian mother very well, so I'm really curious to hear the the punch line on this one. Yes.

Go ahead. So she kept turning to me, like after like the first ten minutes. Like she was like, you know, like, you know, really like, totally enamored by by your talk.

And then all of a sudden she starts turning to me and goes like, like making these faces. And I'm thinking, like, what is she thinking? And then you're listing all these symptoms.

And then at the end she's like, oh my goodness. I think I have Lyme and BCR. And I looked at her and I thought, yeah, because we had been struggling. She had migraines.

She had we couldn't control them. She had night sweats. But it did make sense because she would, you know, already years after menopause, she had these symptoms.

And she literally after your talk was like, I think I have one. And I was like, oh my gosh, okay. But then how many of my patients really have lines? So then I spoke to you briefly and and you asked me about where I was practicing and I said, oh, you know, Armonk.

And you said, oh, you must see a lot of Lyme. And I said, no, you know, I don't think so. And you said, yes, you do.

And it was literally like, that was on a Sunday. Right?

I would like to work on Monday. And then my eyes were open and then it was like, you can't unsee, you know, you can't unsee. You look at it. Well, you got a taste of the epidemic years ago.

And by the way, ultimately your mom had it got better. She raised. But but, you know, you and I have both been on the frontlines of an epidemic now that, in a sense, has been denied for a long period.

But you're right. I mean, it's the same thing with me going to Dutchess County. So. Yeah. So it it was kind of like you had that eye opening experience and with your parents, right?

I mean, it was like, hey, I got to get my mom better, right? She helped me to get through med school. I got to got to pay her back with her kindness. I got to do it.

And I, you know, I have to say that I did learn on her, you know, that that's like the unfortunate thing. But she responded, well, I learned, you know, a lot from you.

I learned a lot from other colleagues. And then, you know, the more patients you see, the more you realize it. And then, you know, somewhere around 2014, 2015, I diagnosed my first patient with mast cell activation syndrome.

And then things started to make even more sense for these patients who have chronic infection, whose immune system is dysregulated.

What mast cells are and why they matter

And why are they dysregulated. Right. And then you start to understand this piece of the immune system and how it's impacting their ability to get better, how it's affecting the ability to treat them right.

And so then that just opened a whole host of others. So that's right. And now of course, you become, I think, one of the world's experts on cell activation with with Larry Alfred.

Right. Maybe you guys have one of the largest clinics probably in the world treating these kind of really complex patients. So so for people, I think a lot of people out there know about mast cells.

But why don't you give people like a court just a one on one? What exactly are mast cells? What are the symptoms they get from it? One of the earliest things I learned was like immediate hypersensitivity to stuff, right, with smelling or touching a tasting.

So just give people like a quick overview of the mast cells in the body and the symptoms they would expect. You know, everything from sinuses to lungs to GI to heart, just to give people a sense, because people are going to be listening and probably shaking their head going, oh yeah, that's that's me.

So go ahead, give them a give them a quick overview okay. Muscle 101. So mast cells are other white blood cells. There are front line of defense against the environment against things that are bad right.

They're protecting us. And they are really strategically placed in our body at all the interfaces with the environment because they're protecting us from the environment.

So you have tons of mast cells on your skin and in your respiratory tract, in your GI tract, you know, all the all the nervous system, all the places where they have to, respond, okay.

And, and they respond to things that mast cells do for you is that they respond to infection, viruses, parasites, bacteria, fungi, they respond to, toxins in the air, different types of pesticides, petrochemicals, you know, so there are lots of things that the mast cells are really, you know, kind of designed to, to address.

And one of the ways they do that, they have a couple of different mechanisms of, of helping us fight. The first thing they do is they manufacture the chemicals.

We call them mediators. And these mediators get released from the mast cell. We call it granulation. They get basically, I think about it as like a marshall exploding and that cells can make over a thousand different mediators.

Actually, we now know there's something like over 1200 mediators that mast cells can make. And one of them, you know, one of them that a lot of people might have heard of is histamine.

Histamine is just one of 1200 other chemicals that they could make. And when they release these chemicals that the, you know, the the goal is to inactivate to stop whatever is happening.

Right? That's one of the ways that they do this. And so but when they release these chemicals, they're releasing them in the tissue where they're living.

Okay. Because again mast cells are white blood cells. But a lot of white blood cells are in your bloodstream. The mast cells are actually in all your organs and tissue.

And so when they release these chemicals, what they do is they actually cause an inflammatory reaction at the site where they are reacting. And then that chemical reaction kind of broadens it and can become more systemic, because there's a lot of crosstalk in the body and a lot of communication happening.

But if the mast cells are responding, let's say to something in, let's say you put up, put a cream on you like some kind of lotion and you have a reaction to it, you know, they're going to they can they can cause a rash, hives, itching.

You know, there are lots of things they can do in the skin. Maybe they're reacting to something in the air, or maybe they're reacting to something that you've eaten.

But but skin stuff is very common in Marseille. Patients. Respiratory symptoms, sinus stuff, congestion, asthma, wheezing, cough in the GI tract, nausea, vomiting, diarrhea, constipation, any kind of inflammatory process in the gut.

Even like motility issues, gastroparesis, in the, in the nervous system, we see, because nerves and muscles talk to each other. So we see, necessarily seeing their chemicals and the nervous system releases, releasing their chemicals.

You can see pain, you can see neuropathy, you can see anxiety, depression, OCD, pans, pandas, migraines, you know, the list goes on. But it's pretty much every live symptom that people come in with on a regular basis.

Mast cells are underlying part of that reaction in, would you say, a large percentage of the people that we're seeing? I would would and that's that's exactly right.

So I always say that I think the bugs are doing something, but I think the mast cells responding to the bugs are really what's driving the the majority of the symptoms.

Right. So and I mean, nella will drive it, but you stick mold on top of it. And then that mold is pushing the mast cells even harder with the infections.

Right. With the lime and Bart and then you get long Covid and that's pushing the mast cells on top of the mold on top of the right. So, I mean, I think the reason maybe you're seeing so much of this is it's now multiple triggers that maybe we didn't all have years ago is why we're seeing so much of it.

Oh, absolutely. You know, I think I think about I like to think about things like an, an evolutionary, you know, way. Right. And anthropologically so, you know, if you think about early humans, you know, they were in contact with,

you know, yeah.

Pathogens, definitely parasites. You know, bacteria, they can have antibiotics. They can have ways to treat it. Right. So masks were particularly important at trying to help them, you know, fight those things.

There weren't a lot of toxins in the air, right. There weren't a lot of other things that that mammals had to worry about nowadays. Right. Fast forward.

And and it's the pathogens plus the toxins plus plus the plastics and, right. And and the list goes on. So I do think that we are seeing an explosion and I think it's going to get worse, unfortunately.

So question do you know whether these microplastic studies that are now coming out where we're getting like a credit card, a plastic every week in our body is showing up in the arteries, right.

It's showing up in the brain is showing up in all the organs. Is there evidence that it's one of the things that may be driving, because all of us are getting it at this point, it's just a question of how much.

Yeah, yeah. There's you know, we have a group that we collaborate with at UT San Antonio. Doctor Claudia miller heads that group there. They they specialize in chemical intolerance and tilt or toxicant induced loss of tolerance.

And they've been describing, reactions to plastics and petrochemicals and pesticides for years. And when we started collaborating with them, we, we looked at our data in our practice and, and correlated with some of the stuff that they do.

And what we found was that mast cells were really at the root of chemical intolerance, and the plastics and chemicals and toxins were the root of that problem.

Like they were stimulating massive dysfunction. And then and then sort of setting the stage. Right. So I think about these things as like there's a vulnerability that everyone has to some extent and maybe some people more because there's maybe some genetic factors and then that vulnerability, then is sort of hanging around and then you get a bigger mold exposure.

You get, you get, you know, Lyme disease, you get. Right. And then all that vulnerability that maybe was set up by the plastics in the environment on all the other things, then, you know, sort of, bring those muscles to a to a new level of dysfunction.

Right. And by the way, and there's there's really no organ in the body. I mean, you you mentioned the central nervous system. You mentioned the GI tract, by the way. There was a patient.

It's not even a patient of mine. It's a friend of my wife's. She's at Baylor in Texas. They're having this workup for unexplained GI symptoms with nausea, vomiting, the most severe pain.

They take out her gallbladder, and they run every test possible.

Testing and diagnosing mast cell activation

They can figure it out. This is. She's a the, she's a friend of leaves, and she says, Rich, you have any ideas here? And I said, I almost bet you bottom $2 it's going to be Marcel because it's intermittent. It's only happening every few months.

I wonder if she's eating certain things, setting it off. So I said, run a trip case, run a histamine, run a Cro-Magnon and a a, you know, pressed. It turns out that the trip case levels are off the wall.

She finally got in Crumlin. Sodium got off the things that were histamine triggers and she has not had one episode. And the guys from Baylor are looking at me like, what of magician?

Are you diagnosing people from far? But what they're not realizing is you and I, we are seeing these unusual mast cells symptoms in people. At any time.

You think, what is this unusual symptom due to? Without oversimplifying it, the mast cells are oftentimes involved in these things. Even the bladder. Right.

You're seeing people with ICI and bladder symptoms with this too. Yeah. Yeah. Oh absolutely. Again like every organ bad night is dyspareunia again neuropathy.

And so like it just it just the list goes on. And you know, I do have to be, you know, we have to be careful. We don't want to overdiagnosed people. But it's really hard when you start hearing multi systemic.

Right. So once you start to hear like maybe there are multiple parts of the body involved, once you see some of the waxing and waning of the symptoms, once you see inflammation as a hallmark feature it's kind of hard not to jump to that conclusion.

Right? I mean, we're not saying it's the only form of where the inflammation is happening, but it's it's one of those inflammatory pathways that's playing a big role.

And it's and it's quite important. So tell people briefly I mentioned them just quickly. And we know there's going to be problems with this because you've taught this to me as far as how fast histamines in the blood.

But just give people the basic blood tests. If they were thinking, do I, as a chronic Lyme patient, maybe I've Marcel, I'm immediately hypersensitive with, you know, nasal congestion and wheezing and sneezing and itching and GI symptoms and all of it.

What were the other tests that you would start with for these patients to try and make the diagnosis. Yeah. So and and let me just say before I jump to that, that you don't need allergic symptoms.

I want to be really clear. You don't need allergic symptoms to have nasal activation syndrome. Right. You can have just the GI and and you can have skin and you can have other stuff, but you don't necessarily have to have that. Right.

So I just want to make a point because I have so many patients who come to me who are told they can't have nasal activation because they don't have allergy.

And so, I just want to put that out there. So, so testing is a little bit complicated for a number of reasons. The mediators that the mast cells produce and release are, typically thermo labial, which means that they're sensitive to heat.

They are very transient. And they and they dissipate very, very quickly. Right. So the collection has to be done correctly. We, you know, like we have a special like we set up a special lab in our office so that we can collect it properly.

And we've partnered with another lab that knows how to process the samples so that we keep the samples cool. We have a refrigerated centrifuge that allows us to process the blood, but we, you know, you want to see histamine levels in the blood.

And and it is easier to measure histamine when you can do it with a with a like our two week free we freeze or tubes and we keep them cold. Then we put them in the refrigerated centrifuge.

It's going to be easier to find. But histamine in the blood plasma, histamine and whole blood histamine can be can be tested. Trip taste. But but I'll I'll talk about trip taste a little bit because trip taste is not a great marker for mast cell activation syndrome for a number of reasons.

Pomegranate and right. So those are like the really easy ones that can be done in the blood. Then, the other one in the blood. That's not as easy to do, but is the most sensitive marker for mass activation syndrome is heparin.

Mast cells are the only cell in the body that makes heparin. So it's a very set, like if you have heparin in your blood and you are not taking heparin, which is a blood thinner that people may have heard of, it's often given in the hospital for blood clots if you're not on that.

And and there's no reason why you should have it in the, in the blood. The problem with measuring it is most of the tests available are for people who are taking the medication.

And so the, the ranges that they're looking at are much higher. And mast cells make like minuscule amounts. So we found the lab that can measure it really, really like it.

Minuscule amounts. And then and then that could be, you know, a really great tool because a lot of people don't have histamine, but they have heparin in their blood.

So these are not the classic labs like LabCorp quest Bio ref. These are specialized labs that have to do this. Yeah, well, for heparin rehab, unfortunately, LabCorp and quest in those commercial labs, they are assay doesn't go low enough to detect.

So what I find is sometimes the hospital labs, that's what we've partnered with a local hospital. Their labs seems to be able to go down low enough to get the heparin.

The other the other stuff, the histamine from a grant and a you could try to get it through a regular lab. Sometimes it comes out and you know, that's that's great.

If you can. I would say the most common when I see probably is chroma grinding followed by triptans. And rarely I don't even know. I can't remember the last time I've seen a positive histamine.

I had one when I checked, but that's before I knew like that the foods I was eating was stimulating. So much histamine in the body, right? I mean, I'm off on my asthma sprays and all my stuff since discovering like, oh, you know, Richie has like, he got he should not be eating these foods and eats.

And then all of a sudden my reactions got much better and I. You'd think somebody's in medicine. Considering how bad asthma has gotten in the world with pollution, you'd think that somebody would have integrated this in medical school training to have people understand how important, you know, food allergies, leaky gut, and Marcellus actually is that it's not all about taking sprays and taking singulair help.

Right? But you got to get to the root causes of why these things are there. I know. Well, my hope is that the more we do programs like this, the more we educate people, in the communities and also hopefully educate other practitioners.

Right. You hope that eventually it's going to make its way into the med schools where they're going to teach this stuff. I'm still I'm an optimist there. It's going to happen.

It's going to happen in our life. But but regarding these tests, you oftentimes have to do multiple assays to get it right. You can't you can't always just get it on the first right.

If you suspect it, you got to keep doing them. You got to keep doing it. Yeah. Yeah. Exactly. I mean, the nuances right of the ground is really high. You've got to look for other causes of chroma Greninja besides mast cell activation syndrome.

If triptans is high, you've also got to look at other causes of elevated triptans. So the two things that we see very frequently are, well, not very frequently, but that frequently caused by triptans is massive psychosis, which is the cancer of the mast cell, which will cause high taste levels, typically over 20.

And then people who have that taste level that sort of like between 10 and 10 and 20, can have a hereditary genetic condition known as hereditary alpha trip to seamier, which is that they have an extra copy of the gene that codes for that protein, that triptans.

And so they make more. And some of them definitely have symptoms of mast cell activation syndrome. But they but, you know, it's, it's the taste doesn't represent the activity of the mast cell and represents this genetic problem.

Okay. So this is a little tricky. And then there are host of, urine tests that can be done both random and 24 hour, that also have to be collected very carefully.

It has to be remain cold, has to be brought to the lab cold. The lab has to pick up cold, keep it cold, studied cold because otherwise these these mediators dissipate.

And so it could be the metabolite of histamine, like, and metal histamine, local trains, prostaglandins, different types of prostate gland in particular in the two two, three dinner of 12 possible and an f two alpha.

So there's a so there are a bunch of them that we can measure, in the urine. And, and I would say, and the ones that I do in the urine loco train is the one that I probably see the most when we catch it.

And and then lastly, you can diagnose muscle activation syndrome also through biopsy samples. So, you know, a lot of our patients have had colonoscopies, endoscopies they've had tissue, you know, checked especially because a lot of our patients have GI symptoms.

And you can request blocks of unstained tissue. And, and if you have a pathologist that you can find, we, pathologists that we work with, that, that we send our blocks to when we, we request them for patients.

And she will run, a CD 117 stain on them and the CD 117 stains, specifically stains for mast cells. And if you see a slightly higher number in the GI tract, we say over 20 is usually indicative of, muscle activation syndrome.

Right. So, so if people have already had biopsies for colonoscopies in the as they save these, that sometimes they can go to a pathologist or it's too late by that time. Correct.

So they save them sometimes for 5 to 7 years okay. So people can request and and then send sometimes the actual lab that did it will be willing to restrain them.

Sometimes they're not because they don't they don't believe this. They don't feel like they're comfortable doing it. They've never done it. And so, you know, we'll, again, it's always easier to work with a pathologist.

We know. And, you know, what you want for diagnosis is you want two points of laboratory evidence in support of, dysfunctional activated mast cell. So a mediator and a positive biopsy or two mediators that are positive, or at least like histamine or programed in a or one to twice if you, you know, if that's the only thing you can get.

We did we did a, we wrote a paper in I think it was 20, 20, that talks, talks about the diagnostic criteria we call our, our diagnostic criteria, consensus two criteria.

And so that's what we use. We say we can use trip days, but you don't have to rely on trip to. So we go through all the these different things that people want to read.

Okay. Okay. So so what do people so obviously you've got to get to the sources of it. Do you find like once the Lyme is properly treated, the bard is treated, the mold is pulled.

You've treated long Covid. Do you find at that point when the triggers are no longer there and we'll talk about medications and supplements and things we use.

Do you find then the mast cell activation is better? Once the actual triggers that are triggering the mast cells are

better. That's an excellent question.

And I and I would say it's complicated. So there's a subset of people who have what we'll call secondary muscle activation syndrome. And secondary muscle activation syndrome is basically that they have a normal mast cells at baseline.

They get Lyme disease okay. But they would not. Their immune system was normal before they get Lyme disease.

How mast cells interact with Lyme, mold, and toxins

You treat the line, the mold or whatever it is. And when you remove that trigger, their normal mast cells return to normal and their symptoms return to normal.

And they're essentially, you know, quote unquote, cured, right? They're they're in good shape. I think that's very rare. And I've almost never seen that.

What's more common is but I think it I've definitely seen it a few times. But it more it's more common is, you know, what we'll call idiopathic muscle activation syndrome.

And in the majority of cases, that's sort of like it's a combination of, of like a, like a primary and secondary. So they have dysfunctional mast cells at baseline.

Okay. So what I think happens is that people are exposed to things very early on in life. And some of it is because of like genetic vulnerability. And then they're exposed to various infections.

They're exposed to stressors. You know, parents got a divorce, there was a death in the family. There was abuse, the trauma. I mean, you know, they live on a farm with pesticide or, you know, there's, maybe a farm nearby.

I mean, there's so many, so many factors. Okay. But I think that there's early in life exposures or triggers that sort of bring out the dysfunctional mast cells.

And so at baseline there, mast cells are sort of like leaky. You know, you mentioned leaky gut I think about it as leaky mast cells. They're leaking a little histamine.

They're leaking a little bit of mediators are causing low level inflammation. These patients may realize that they're not, you know, healthy or they can think they're very healthy.

They may not even realize it. They may say oh oh yeah I've seasonal allergies. Oh yeah, I get migraines once in a while, but I'm fine. I'm healthy. You know, I work out, I do this, that, and they they really do seem fine, but they're mast cells are really not.

Then they get a mold exposure and or, you know, like Bartonella whatever. Now their dysfunctional mast cells are brought to a new level of activity. You treat that, you take that all the way, you take all the triggers away.

Now their mast cells can can come down, but they're now going to return to like they're never going to return to normal because they weren't normal. They were always dysfunctional.

So now they're going to return to a better dysfunctional level, not as reactive. And they may be quieter, but but a lot of these patients will still require some treatment or some vigilance that that the mast cells can get activated pretty quickly because they may just be quiet for a little bit.

But then there's a trigger that comes along. And because they weren't fully normal, they get reactivated. Does that mean so. These are the people that may have to stay on H1 H2 blockers and Montague caste and or Crumlin sodium like they have to stay in the stuff longer term because they have these dysfunctional mast cells even when the triggers have been removed at that point.

Correct? Correct. Right. And I think people don't want to hear that, you know, they want to hear that they can go off of everything. And so I definitely do trials with patients where we say, okay, you know, let's try, let's try to wean you off and see what happens.

Right. And if they start to wean and they flare, we have our answer, you know, and if they wean and they do well for a period of time, great. And if the symptoms come back, then it's a sign. All right.

You got to get back on the stuff. So you know you can experiment. But I would say again vast majority are going to need long term treatment at some point in their life.

Got it. So let's so now that we've done the and that was by the way a great overview of the biochemistry 101 on Marcel. So let's do treatment 101 about how you layer it up for the more complicated patients.

So where do you start with these patients with Marcel. So you know, again, it depends. Right. You know, I have pharmacologic two tools and I have non pharmacologic tools.

Now some patients I might start non pharmacologic and really depends some patients are very fearful of drugs right. So I might start you know with with a quercetin or vitamin C or NAC or Ala or something.

So those are all theoretically nasal stabilizers or antihistamines. I might start with a pharmacologic H1 blocker, histamine blocker. That would be the class of the anti histamines.

Claritin, Zyrtec, XYZ, Allegra, Benadryl. You know there's some that are prescription. Those are all over the counter. So we kind of start there. And I will say that, you know, beyond stuff that I want them to take a real key piece.

I know you're going to agree with this. A real key piece is limbic retraining. So while we're we are treating them, you know, with with stuff to calm down themselves.

You we see the role of the nervous system and the autonomic nervous system in the limbic system. And, and I think that a lot of people should be doing limbic retraining either at the same time, you know.

Like, I know I need to do it. I walk down the hall, my wife says, I don't feel like cooking tonight. Let's go get a pizza. Almost immediately, I'll start sneezing.

Right? Just with the idea of eating a pizza. Even though, by the way, my tolerance for dairy has gotten much better over time. Oh, I, I recognize for myself I need to do Olympic training to reverse.

Because I, I've got it wired in because I had allergies, severe allergies. And again, you said it's not always so, but my whole family, I remember my father and my grandfather during, you know, spring season, literally like waterfalls flowing from their nose in their eyes.

Their allergies were so bad. And I inherited, you know, some of that. So, I agree with you 100% on the limbic. And I got more and more over time. And I've been speaking to doctors during this doctor talk about it.

I think everyone now is starting to realize that the limbic retraining is an essential piece of the healing from Lyme. Whether you think you've had trauma when you were young or didn't, there's certain things that have just gotten.

They just need rewiring. And you're now saying hey themselves as part of that. Yeah. Yeah, absolutely. And I see some incredible results sometimes it's it's the key to unlocking this whole thing.

And sometimes it's just a piece of the puzzle that they need in order for other things to work. Sometimes they're so reactive that, you know, we can't start with limbic retraining.

We've got to we got to calm things down first, then enter the, you know, limbic retraining. But but I want to mention

that because I think that's a really key component, you know, to talk about, there are really like, you know, at least 30 different drugs, if not more, that we can use for mast cell activation syndrome.

There are lots of different, supplements.

Treatment approaches and medication options

That are, that are being looked at things like Aquaman, see, things like different probiotics, again, different kinds of anti-inflammatory compounds can have some, you know, the cops, if they have some Cox activity, Cox 1 or 2, they can, help to reduce inflammation.

We have those on the pharmacologic side. We have it on the non pharmacologic side. So it really you know, I think that what's what's helpful about doing the testing is that sometimes if you know what the mediators are you can target things a little better. Right.

So if a person like you has a lot of histamine right. A lot of the things that we're going to be gearing towards is going to be against the histamine.

We're also going to look at other stabilizers and things like that to calm the mast cell down. But I know histamine is your issue, right? I know people who I can test histamine, you know, 20 times, history is never it's not their issue.

Maybe their issue is, look at trying. Right. So then I know that I need, like, a singulair or an accolade or I need, you know, something in that sometimes even, like the SP, the, the pro resolving mediators can help with the leukotrienes.

If I know there's a prostate gland in D two issue, then I you know that. I know that like all the Cox inhibitors and things like that will target the prostate gland.

And so so sometimes it's not perfect, but sometimes you can gear it towards what the mediators are. And sometimes a lot of it is just trial and error.

And you've got to give like 2 to 4 weeks with each, with each attempt, you know. You normally use, for example, something like famotidine, an H1 and H2.

Do you find that blocking histamine one and histamine two is just part of your general protocols that you find, you know, helpful. Yeah. And I you know, listen, there are a lot of patients who do better.

It's interesting. They do better with H2 than H1 or they do better with h1 h2, h2. So I can't use them together in a subset of patients. And so it's very clear you put them together.

And the more histamine receptors that you can block, because the mast cells and cells have histamine receptors. So when you use these histamine blockers you're blocking receptors on other cells and you're blocking the effects of histamine, but you're also feeding back on the mast cell and telling the mast cell, hey, you know, stop producing all the system.

So by by blocking more histamine receptors with H1 and H2, you might, you know, you might achieve that a little better. You know, we are it's unfortunate that we have we're limited with the number of H2 blockers that we have available these days.

Zantac was like a game changer for so many patients. Ranitidine. But it was pulled off the market because of a chemical that they found that was produced in the manufacturing process.

I keep hearing about it coming back, and I'm still not able to find it. So you you actually number 19 was better than famotidine when you were using it.

As far as an H2. That's interesting. Yeah. For a subset subset of patients for other. What about the same I mean cimetidine is still around. I use it in the DAP.

Some protocols you know, to lower hemoglobin. And even these even have antiviral effects. Do you find that cimetidine has. Yeah. For some people so many times the answer.

But you know that cimetidine does have some interactions with with some drugs. Yes. A little more challenging. But at least we have that. Right. So we have, we have the, the motor gene, we have the cimetidine.

We used to have a prescription, one called, nice adenine. I think that was also pulled because of the same issue. That was from years ago. You're bringing me back two years ago? That's correct.

Remember acid. I think that's what it was. Do you remember it well? Yes. Yes. So? So for a lot of people, it is going to be a little bit of experimentation.

But what you're saying is if you can get the mediators, if you can show which mediators they're you can be a little bit more specific with the targeting.

But there will be some people that need an H1, H2, like, you know, using something like Zyrtec and Pepcid using my ALU cast. When do you decide to use the Crumlin sodium?

When? When you're using that for the gun. So you know it. Typically I like to start with with H1 and H2 because they can be so profound. Right. But sometimes either they're not enough.

So maybe in some some patients they're noticing that it's helping some symptoms, but it's not really helping other symptoms or it's not helping at all.

And then I'll move on. Crawling might be the next thing I try, he taught us. And maybe the next thing I try. It really depends. Certainly with gut symptoms I might, you know, gravitate towards the Crumlin.

The other symptom that has me gravitating towards Crumlin lately is neurologic symptoms. What's fascinating about Crumlin is that it's a it's a drug that does not get absorbed.

It's you you know it comes in a liquid. If it's compounded it comes in a powder capsule. You take it, it works in the gut comes out nestles in the gut.

Now there's going to be people they're going to definitely be people where their masks cells do not like Crumlin and makes their G. I symptoms worse. But they're going to be people who do not have GI symptoms but have a lot of neurologic symptoms.

Could be anxiety, could be OCD. I've seen this with I have a couple of pans pandas cases for whatever reason. It's like a crosstalk between the mast cells and the gut and the mast cells and the nervous system.

And we know that there's so much of the nervous system in the gut. Right. And probably that nervous system is talking to the rest of the nervous system.

And so they take Crumlin and like their anxiety disappears or their OCD. Oh yeah. It's pretty it's pretty mild. So that's that that is absolutely fast.

This is the first time by the way, I've heard this because, you know, we've interviewed people before regarding pans pandas and using IVIg and all the things you're doing.

This is the first time I've heard anyone this is that's a fascinating, you know, trick to know that the crosstalk between the gut and the neuro system you're seeing that I've never heard that before.

Then, by the way, that should be published. I don't know if you've got an even a case study on it. I do, I have I want to. You more work. But, but it sounds like that's actually a case study that you may want to consider publishing.

Yeah, yeah. No, I 100%. Yeah. I have a list of cases that need to be published. But I've seen again and again, not just Crumlin, but other targeted therapy helping inflammation in the brain, autoimmune SFO apathy helping neuro neuropathies, helping anxiety, helping some of these other symptoms, even depression.

So we know that the mast cells are playing a huge role. And if you could find the key to those mast cells and again sometimes it's Crumlin but sometimes it's other things, then if you can, you know, figure that out then like everything just sort of you know get gets better.

So it's pretty is pretty. Pretty you know that that that's a great point with it. So so obviously it is going to be individualized for many, many people.

I mean I found in general I mean I don't do specifically obviously not as much as you do, but I do find that I have a lot of patients that are on H1, H2 blockers with Matt Lucas.

Some of them are taking chromium. They're using like his to call from Research Nutritionals with quercetin. They're on vitamin C. He's still using again the diamine oxidase.

This is mostly going to be in the people that are releasing a lot of with histamine symptoms. Otherwise you're not going to find it to be all that helpful.

Correct? Correct. And histamine symptoms that tend to be more in the gut are related to the food intake. Right. There's some very specific things that I think, histo can help with.

I had a case okay. Another case I probably should be published. I had a case of, a patient who actually did not have GI symptoms but had this was very, very, very early on in my nasal journey.

Right. So this could have been 2014, 15. She wasn't the first patient, but she was a patient that was mine that I had as a as a primary care patient for a long time.

And once I diagnose, sort of diagnosing other people, I was like, you know, the light bulb went off and I was like, wait a second, I think that's what you have.

She had interstitial cystitis, fibromyalgia, and migraine, I think were her main symptoms. And I started treating her, you know, H1, H2 took a while to figure out she could only respond to a very specific formulation of Claritin.

It couldn't be Claritin brand. It had to be like Rite Aid brand. You know, it had because because excipients can be an issue. So we had to find one that had, you know, specifically.

Sure, she figured out which brand was best for her. We did all that. And then again, early on, I didn't know all the tools. So history, how we had access to.

So I you know, I started her on that and it helped her. I see it helped her interstitial cystitis because histamine was part of her thing. Right. And and again, at that time we were having trouble testing.

So I just made assumptions. And so there, there was a case of how for a non gut, you know, results. So yeah. And when do you decide to use ketone to finish it.

Mostly just in these people that just have severe symptoms that are failing the classical therapies. When do you add it on for these people. Yeah. It doesn't have to be severe symptoms.

I mean any symptom that is not responding to like the first line h1 h2 cuz I think you can go you can go to it often. I kind of think about it this way.

Like it can be Ketoprofen, it could be Crumlin, it could be low dose naltrexone. That may be my next level. And again depending on symptoms, depending on their response to other things I might go the Utah Tiffin route.

So ketones often has some antihistamine properties and is a nasal stabilizer. So I might think like let's say they're getting response to an antihistamine.

And we've tried all the antihistamines we figured out, all right, loratadine is the thing that works for them. But you know, maybe it's only helping like 60% of the time.

So then ketosis might be worth it because, you know, maybe I get a little more, antihistamine property. But then I also have the stabilizing property. Right?

We see Poppins. You know, the reality is that until we have studies that allow us to look at the genetics of, of a, of a person's, a patient's mast cells to know what mediators they're really making.

Because I think if we could do that, if we can map out the genetics of the mast cell, because there's somatic mutations that are different in different individuals.

So if you knew that, you know, their mast cells were making certain things, you could probably figure out, okay, they're going to need ketones and they're going to need muscle gas.

And even though they're a good genomics lab like Bob Miller's Nutri Genomics Lab, I mean, they they still won't do those kind of testing that you're talking about.

Now because those are like, that's the genome. That's the that's the, yeah. How do I how do I distinguish it? I'm talking about mutations at the level of mast cell.

We call them somatic mutations, which is not the systemic, you know, and. You and you mentioned DNA. And of course, we use a lot of it in our Lyme patients to decrease microRNA, glial activation.

So is it. The DNA is also decreasing. Some of the mast cell activation that's going on in the brain. Is that exactly what's happening with some of that.

And yeah naltrexone is binding the mast cell. Muscles have opioid receptors also. And so I think it's directly addressing and stabilizing mast cells, not just in the brain but also elsewhere in the body.

It's modulating the immune system as a whole.

Closing thoughts and resources

And so in some patients that's helpful. I certainly have patients that don't tolerate LDN. For a number of reasons. I still can't figure out how we figure out who's the person who's not going to tolerate it, but when when it works.

Yeah. It's pretty, you know, it's also pretty remarkable. Yeah. No. That's great. Tanya, we're getting. I knew we'd run almost an hour. So we're we're almost an hour.

So why don't you just tell people, first of all, how did they get in touch with you? Because I know a lot of people that go on to access your your wisdom here.

What's the best way to get in touch with you? So. Okay, so I have a website, Dr. Tanya Dermstore.com, and I, I have a lot of blogs and a lot of resources for, for, patients, with complex chronic diseases.

I have murkowski guys. I have lots of things on my website. I have social media, Instagram. Dr. Tony Dempsey, M. D., Facebook, Dr. Tanya dempsey, I have a podcast called masked so matters, which I'm really proud of.

And we've had some really great, interviews and, and, I don't have we interviewed you yet? I'm not yet. Okay. Well, that's you're definitely going to be on.

And so we're just starting, you know? So, yeah, you're definitely going to be our guest. But, we interview everything sort of, massage related and also and also adjacent.

So the other complex illnesses that overlap, such as vector borne infections, of course. And, yeah. So those are the best, best ways to sort of see what I'm doing, and reach out.

And I'm always happy to, to hear from people. Good. Well thank you, Tanya. This was great. I know people are going to get a lot out of this, because it turns out themselves is really an important piece of all of these people that we're dealing with, with chronic Lyme and and co-infections.

So thank you for taking the time today to to share, by the way, any other pearls, any of the thing we didn't cover today that you think people might want to to know about?

Yeah, I mean, I think one thing I would say is that, this is fairly common muscle activation syndrome. You know, some studies have shown that at least 17% of the population think it's going to it's I think it's closer to 20% now, have it right.

1 in 5 people. So very common. I think it's probably going to get a little worse. So you're not alone. You know, people listening to this who are thinking, wow, that's me, you know, and they feel they feel isolated.

They feel like no one, you know, believes them. They think, you know, that everyone sort of thinks they're crazy because the symptoms are coming and going and moving and migrating.

And you know, what I want to say is, I think a lot of people out there who have this, who don't even realize they have it, or suffering silently. So you're not alone.

And, you know, thankfully, you know, there are programs like this again, podcasts and other educational tools. And so, you know, empower yourself, teacher, teacher practitioners or doctors, if they don't know about it, help them, help you get better, you know, and that's, sometimes, you know, unfortunately, that's.

Because because, you know, inflammation is the underlying cause of all the symptoms people are getting with chronic Lyme in most of these diseases. But I think the Marcel piece is an important piece of that inflammatory response, as you explained.

I mean, it's it's on the skin, it's on the interact, you know, where the GI tract is. It's I mean, it's everywhere and every organ in the body. So, you know, considering I mean, look, I didn't know about it years ago when I was dealing with more allergies and asthma.

Ever since I started using some of these things and getting off my histamine foods, my health has become much better. So it's I think it's it's a real turnaround for people.

And there's hope. And I think it's another piece of the puzzle, right. That really helps people with chronic Lyme disease get better. So thank you for taking the time and and sharing.

That was great. So for everyone who's been listening, you've been listening to Doctor Tanya Dempsey one of the world's experts on mass health disorder.

You can you can find her in. So now you're not in Armonk, now you're exactly. You're located where exactly? Okay. I'm in purchased New York Ames Center for personalized medicine.

Yeah, we are in Westchester County. Very good. So thank you again. So again, this has been Doctor Richard Horowitz and the co-host of The Doctor Talk Healing Lyme Summit 2.0.

Thank you for joining us today. We hope to see you again for another episode soon. Thank you.