Opening and podcast introduction

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Is there potentially some overlapping mechanism between the two? Do the spirochetes contribute? It was just, to me, that was the most interesting finding of the paper besides the prevalence.

Welcome to Demystifying Pans and Pandas, the podcast where we uncover the mysteries, breakthroughs, and hope behind these life-altering conditions. I'm Dr.

Nancy O'Hara, a board-certified pediatrician, educator, an advocate with over three decades of experience helping children and families navigate the challenges of neurodevelopmental and neuropsychiatric conditions, especially pans and pandas.

These disorders can feel overwhelming, but here we'll break down the science, explore transformative treatments, and share stories of resilience and recovery.

If you've ever wondered what's possible for your child or how to find answers, this is the place to start. Let's dive in. Hi, it's Dr. Nancy O'Hara and welcome back to Demystifying Pan's Pandas.

And I am really excited to bring back the show Dr Lindsay Wells, one of my favorite doctors, practitioner, naturopath, mom, friend, colleague, and just doctor extraordinaire.

plus lecturer and being called out and given all kinds of kudos by all kind of docs. But I just wanted Dr. Wells to come back on to talk again about the folate receptor antibodies because recently she and Dr Mariah Hinchy expanded on the research that was started in folates receptor antibody and cerebral folic deficiency by Dr.

Raymaker, Quadros, Frye, Rossignol, and a paper that Lindsay wrote with, I had just a tad to do about it, but only a tab. And now this one by Doctor Wells and Doctor Hinchey.

So Lindsay, thanks so much for joining me. Oh, thank you for having me, am happy to be back. Well, I'm glad. And I really think this cerebral folate deficiency is something that is very misunderstood and really needs a deeper dive again.

So let's start with your most recent paper. Where was it published? What's the title? And give us the little five-minute version of it. Yeah, so it was published in the Journal of Diseases in beginning of June, and the title of it is, Follate Receptor Alpha-Autoantibodies in The Vector-Borne Disease Population.

So, to our knowledge, this is the first time that this has been explored and looked at in this particular population. We included about 68 children.

New folate receptor antibody research in vector-borne disease

They were all from my practice here, where we tested them at initial consult of looking for vector-borne disease, and then also the folate receptor alpha-autoantibodies through frat tests.

And we looked at the prevalence, And what we found was really, it kind of actually coincided with what We found in our PANS and PANDAS paper, actually, very similar.

So we've found that 61.8% of children were positive for the Folate Receptor Alpha-Autoantipodies, which was

similar to what found, Which was 63. 8% in children with Pans and Pandas.

That was pretty exciting. that finding because it's significant. Yeah. And for those of our listeners that don't know, cerebral folate deficiency is something that is found in somewhere between 70% and 75% of children with autism.

That leads to a lack of folates in the brain. The symptoms that we see in children speech disfluency, brain fog, cognitive delays, anxiety, perseverations.

But what did you see in the children, both in The Pans Pandas article, as well as the one you just did on vector-borne diseases? Yeah. So what was interesting in vector borne disease population in that paper, what we did was we looked at five different symptoms.

We looked anxiety OCD, depression, ASD, if the child had autism, and then also ADHD. And we went back in the data and kind of just looked to see if children who were more likely to be positive for the folate receptor autoantibodies were likely more to have those symptoms.

But what we found, which I think was actually very telling, is that we couldn't tell a difference between who would be more like to the have folates receptor antibodies based off of symptoms?

So what this tells us is really that you still need to test for this. You can't just make assumptions, even though it's very high in prevalence. And I feel very comfortable in practice with like a child with autism, for example, to do a therapeutic trial of folinic acid, you know, just because the benefits can be amazing for that.

It's a very safe intervention, very benign intervention. But it was just interesting that unfortunately we couldn't tell who would be more likely to be positive based on symptoms alone.

So I always think it is helpful to get the data. It is help to test. Absolutely, and in your clinical practice with giving folinic acid. First, what's the difference between folate and folicic and methylfolate?

Let's talk about that a little bit. And second, What have you seen in practice, whether it be kids with autism or kids, with Pans Pandas or or, kids With vector-borne diseases that don't fit strictly into the PANS category?

Yeah, so just going back to what is folate. So folade is B9. It's an essential vitamin that we all need. And we hear a lot about it, right, during pregnancy, and making sure that a woman is taking enough folates.

Unfortunately, in prenatals, they're using folic acid, which is not the form that they necessarily need, but we need foliate. That helps with decreasing neural tube defects.

They've also been shown to decrease the potential of having a child with neurodevelopmental disorders. But we need folate throughout our whole entire life.

It's important for RNA, DNA, amino acid synthesis, neurotransmitter synthesis. Um, it's necessary for our immune system. Like the list kind of just goes on and on.

it is a very important critical nutrient that we meet throughout life Now, when we eat food, like green leafy vegetables, that's the highest food source for folates.

We can't just absorb it just in that form. Our body has to convert it into the bioactive form that we can plug into our pathways and utilize. So in the pathway, folate goes to folinic acid, which is what we supplement with or what give for cerebral folic deficiency.

But further down in pathway is the methyl tetrahydrofolate. That's the most bio active form of folates. That's actually the form that can bind into the receptors on the blood brain to be drawn into brain.

But some children, which is what we're studying and what look at, right, is those children could have autoantibodies

that block the ability for folate to get into their brain because they block those receptors.

So instead, we use the step-up, flenic acid, and that uses a different carrier transport called the folic carrier and shuttles the flanic acid into Yeah.

And so what we see symptom-wise improving in our kids is… Yeah, so it really is, it ranges, right? In my practice, I see a tremendous improvement with neuropsychiatric symptoms.

So I place this in the category of symptom support, even though it's doing a lot more in terms of like, It's helping the immune system, that's supporting the mitochondria.

But symptom-wise is where I see the improvement. So I the improvements with anxiety, OCD, depression, executive functioning, ADHD, and also the big one that I a speech dysfluency.

And so of course with kids with autism, it's like you hear those amazing stories that there's more speech and vocalizations and all of that. I definitely see that, but what I find so interesting in our children with pans and pandas is that over 50 of them in the studies at least, have found that there's some sort of speech dysfluency that can occur during a flare.

So I see a lot of stuttering in my practice, like when a kid is in a flair, for instance. And when we give flenic acid, we see improvements in those speech disfluencies like stutter.

It's really quite amazing. That's one of the big ones that I've seen, but it's the neuropsychiatric symptoms, which is why I place it into the category of symptom support in that three-pronged approach.

What about you? What would you say? I agree. The only other one I'd add is ticks. Absolutely. And that's what we saw. I've obviously seen things come down.

In the paper that we published that you were by far the lead on was that tick severity and frat binding antibody correlated.

How folate metabolism and folinic acid work

Yes. That was, I think, one of the most interesting findings of our research actually was the higher the binding autoantibody level was. the more likely the kid was to have ticks And one thing I see clinically is my children with pans and pandas and vector-borne disease is their auto-antibody levels are higher than what I seen in my child with autism, actually.

I'm not quite sure what that means. It's just something that I've noted. Yeah, now in the paper you just wrote, in The Vector-Borne Diseases, was there any delineation of which vector-borne disease?

Borrelia, Bartonella, Babesia? Yeah so we looked at that and so I wasn't surprised at the infection that was most associated and it came out to be Bartonella.

Bartonnella in and of itself was about 24% of the cases and then the second most common was relapsing fever with Bartonella and that was another 14. So we were looking at almost 40 percent of the children who were positive for the folate receptor autoantibodies had Bartonella in their system.

Okay. And the other thing I wanted to just mention is that although we are both big fans of this test, there are also genomic defects, you know, SNP, single nucleotide polymorphisms, that also can decrease your ability to break down folate into folinic acid and methyl tetrahydrofolate.

And that alone, even without a positive frat, can also decrease your able to get methylfolade or metabolize folade into your brain. So it's something else to think about in the whole picture.

Absolutely, yes. In the kids that you see, why not put everybody on on folicic It's a great question. Again, I feel very comfortable utilizing folinic acid, but I think it really, again, depends on the child's symptoms, right?

If a child is presenting with neuropsychiatric symptoms and I doing it the right way and working with a knowledgeable provider on how to start and build up on the dose to decrease the potential of some side effects.

And then also somebody to give guidance on, like, how long do you do it for? And, you know, do just do flenic acid or do also implement the dietary recommendations too, which I think are really just as important as putting in the flanic acid.

Yeah. So let's talk about all of those. First of all, the dietary. We all know that all animal milk Cow's milk, goat milk camel milk also block those folate receptors and so are you putting everybody with a positive frat on a dairy-free diet?

Yes. completely dairy-free diet. That means no dairy baked into things, that means, no butter, full dairy elimination. And I tell families this is more of a long-term elimination, it doesn't mean necessarily they have to be off of it forever, but it's something that their system is reacting to.

And that is a contributor to why they may have these folate receptor alpha-auto antibodies. And there was that little study that was so interesting of looking at the levels of the auto antibodies and the removal of dairy.

So when they got the baseline, removed dairy out of The Children's Diet, and then they reintroduced dairy, And when the re-introduce dairy their folates receptor-alpha- auto-antibodies went higher than they were initially.

And so this is what I tell parents is this might be a longer term elimination and could really be potentially the root cause as to why your child has this.

So you need to take it out. You can't just supple with phalonic acid because it's almost like we're just chasing our tail a little bit. What do you say, I can hear the parents in the back of my ear saying, my kid has ARFID, My kid, you know, has a restrictive eating disorder is one of his symptoms of pans, or, You know my kids 17 and on his way to college and he won't even think about removing dairy.

How do YOU address that? Have you heard about cerebral folate deficiency? If not or if so, this is a diagnostic test you need to know about. The Folate Receptor Antibody Test, or FRAT, detects autoantibodies that block folates transport to the brain, critical in conditions like PANS, PANDAS, and autism.

Early detection means targeted treatment with folinic acid, improving brain function, reducing inflammation, So get the answers your child or patient deserves.

FRAT testing may be the key to unlocking better care. And those at Religen DX are revolutionizing diagnostic testing by equipping healthcare professionals with cutting-edge tools for early detection, targeted interventions, and improved patient outcomes.

Their innovative solutions, including the folate receptor antibody test, for PANS, PANDAS, and autism provides critical insights into neurologic and immunologic related conditions.

With a commitment to scientific excellence in personalized medicine, Religen DX empowers clinicians to make informed decisions and optimize treatment for every patient.

For more information, please visit fratnow.com or religiondx.com with families. Yeah, so when a child is a certain age, they're going to start making their own decisions, right?

And so you have to give them a little bit of autonomy there. The best we can do as parents is like to educate them. And then also, if they are still living in the household, not having dairy in their house, that like in of itself will limit the amount that they will eat.

You know, it is really hard with a child with PANS who has restrictive eating, right?

Clinical benefits of folinic acid in PANS, autism, and infections

And so, you know those ones I'm a little bit more cautious on where it's just like that's not going to be like they walk out of the office and they're immediately dairy free.

It's like, that is a process and usually what I see is when kids get better, their diet does expand and their more open to trying new things. So it might not be right in that moment where we get the lab results that they are able to this particular form of, I don't know, chicken nugget that has dairy in it, maybe just slowly, every time you go to the grocery store, get a different brand and see if we can try to slowly change the nuggets over to one brand that's dairy-free or something like that.

So in those cases, it's slow. And I always try tell parents, with the kids that have the restrictive eating, we're trying to add more things in rather than take more out.

Yeah. And you mentioned about the side effects that we can see and why we start low and increase up slowly. So talk about what some of those side-effects can be.

Yeah, so the most common ones that I see, at least clinically, are irritability and agitation. I can also see sleep disturbances where difficulty falling asleep, not waking up in the middle of the night or waking early.

It's really the difficulty of falling sleep. When we introduce it or when we increase up the dose and it seemed very quickly I mean within 24 hours at least that's been my experience and then when We decrease the dos or they come off like if they had Just, you know put it on and started to have side effects that the symptoms resolve within twenty four hours So, I think it's just most important that We educate and we tell parents about the potential so that they can keep their eye on that.

And if, say, we increase to a certain dose and they start to have those side effects, I'll decrease back down and I just hold there for a bit longer, a few more weeks, just so the neurotransmitters in the brain can recalibrate and then we increased back up.

It's not that we stay at that decreased dose. It's like we just give it a little bit more time. We just pushed a hard too fast, but we still get to the end result.

It might take a bit of time, and that's okay. Yeah. And I totally agree with you. Some of the research shows it can take up to six weeks for the metabolized folate in the brain to equilibrate.

So yeah, waiting longer to go up but also not ignoring those side effects because they may be a clue that maybe the child needs something else, you know, in addition.

Now, what do you think about using a combination of folinic acid and methyl tetrahydrofolate? Do you consider that in some of these kids? Personally, I don't because I see that the kids that dont tolerate the flenic acid at the high dose, they're also very sensitive to the methyl tetrahydrofolate as well.

And so usually, and I think theyre more tolerant by putting that one in. Instead, how else can I support this child? Can I put in some calming interventions for them?

can i put it some mitochondrial support for that maybe you know something else in or a co-factor like the b12 maybe I'd put the B12 in sooner then I you usually put B 12 in after depending on the situation but sometimes after I get them on full dose of folic acid so then i tweak it but usually I go about maybe calming support or some my mitochondria support to make them better tolerate the intervention Yeah, there are one or two kids that I have that, you know, the parents were originally on methylfolate and then switched to folinic acid, felt that they were worse, added the methyl folate back in and felt they we're better.

We haven't necessarily done their genomics. Maybe there's something there that would give us a clue, but I think that it's somethin' to think about because methyl-folated in some of our kids can be one of those calming interventions that you described.

But I totally agree. Now, what about the dose you get up to? How high do you go? What was the research showing? Yeah, so in the researchers, I stick to what the researcher shows, which is two milligrams per kilogram, up 50 milligrams a day.

right, of child's responding really well, or maybe they're not responding, and I want to try more. And so some of us in this space are going higher. I know that you had Dr.

Frye on the podcast and Dr Rosignol. Some of them are up to 100 milligrams per day or even higher than that. One thing I do have to say is that the children that show up with the soluble folate receptor, those are the kids that automatically give me a clue that I will likely push them past 50 milligrams if they are 60 pounds or heavier.

And that was actually a really interesting finding that we found from our paper too about the solubile foliate receptor. Talk about that a little bit.

So the soluble folate receptor, this is an abnormal finding. When they're looking for the blocking autoantibody, sometimes we can get this abnormal find, which is just SFR that shows up.

And essentially what this, is it's a protein that has a high affinity for folates that they find in the sample. And it is an abnormal finding. And they find it in about maybe 5% of all the samples that are sent in.

So I don't want to say in the general population, because obviously, not everyone is being tested for this. There's a subset of people that have been tested.

In the group of samples, about 5%, will come back with the soluble folate receptor. Our study, we found that 11.8% were positive with a soluable foliate receptor Now, what we know about soluble folate receptor is that this is more likely to be found in people who have more medical complex pictures and also may respond to higher dosing of folinic acid.

And that's the research that we now from autism. What was also interesting from our paper is that seven out of eight of those children that were positive for the soluble folate receptor, they all had evidence of Borrelia species in their blood.

And so I don't know what that means. Is there potentially some overlapping mechanism between the two? Do the spirochetes contribute? I don't know. It was just, to me, that was the most interesting finding of the paper besides the prevalence.

But, you know, in those children that have soluble folate receptor, those are the ones that I'm really thinking, like, we should be pushing past the 50 milligrams if they tolerate it.

Absolutely. Now, do you ever talk to other doctors as I do about, you know, this is vitamin B9. This is a really safe intervention.

Dietary dairy elimination and managing side effects

How do convince other practitioners to consider this in a child? With a positive test or not? Yeah, that's a really, really great question. Again, I use it as a B vitamins, B9.

It's water soluble. I think that big thing that people get worried about is just toxicity associated with it. But we really have to understand how it's metabolized and we just excrete out what we don't need, essentially.

And so when I talk to them about that and then also tell them all the studies that have been done in autism and in

children, because I where practitioners get a little weary is when They're not familiar with it.

And then they look it up, and they work up leukovorin, which is the flenic acid pharmaceutical that we use. Then they see that it's categorized as a chemotherapy drug.

The reason that is categorize as that, is because they give to help replete people's full weight levels that get depleted when they go through chemotherapy.

And so I think, you know, kind of just explaining that and then also saying like, there are 20 plus papers, done just in children. with autism with the use of thalenic acid and leucovorin, right?

This isn't even other populations like treatment-resistant depression, epilepsy, seizure disorder, anxiety, which is just animal models. And then also we had a few with cognitive decline too.

So that's kind of how I just kind present them with all that information. I do have like one area where I keep all the papers just to send because They should be educated, and this can be such a game changer for kids.

And just because we might not know something as a practitioner, I feel like that's not fair to then withhold that potential treatment for a child. Especially when it's safe.

Yes. As you said, water soluble. We know we have fat soluable vitamins like vitamin D and vitamin A, we should following levels. But water-soluble vitamins, all you're going to end up getting is expensive pee.

You get too much and you're, you know, don't need it. Like, we need to think about these things. You know it's sort of about a lot of our discussions.

Not all antibiotics are the same, not all vaccines are same. not, all vitamins are, the, same and and we, need, to, think, about the safety of this first as, well as the efficacy and then like you said 20 studies alone just in children.

It's not something yet to be discovered or discussed or researched in kids. It already has been. But we're not here to sell anything. There are also products out there that are phylinic acid, that that our supplements, are nutraceuticals.

Now, the biggest problem that many families have is that, many of the products out there are 800 micrograms or, you know, one milligram. And we're talking about needing one to two milligrams per kilogram.

So you're taking 20 pills just to get your flenic acid or more. So, you and Dr. Hinchey came up with a great alternative. Can you talk about that a little bit?

Yeah. So the other thing just to be aware of with nutraceuticals is also the form of folate that's in these, right? And so, there's folic acid, which is synthetic, is man-made and the body really can't utilize that well.

Then there's the methyl tetrahydrofolate, which is readily available. But then it's phylinic acid, and we need that in the form of calcium folinate. Okay?

And so that's, the forum with Leukovorin is the calcium, folinate. And, so we came up at a frustration that our patients weren't able to get the prescription from certain providers, is just a pure form, of Calcium, Folin, under our brand emphasis at higher dosing.

So we have a five milligram capsule, but also a 15 milligram, capsule. And so this then, number one, decreases the amount of pills because some of our patients, when we were using, only had 800 micrograms available.

I mean, they were taking a bottle a day. That's too much. You know, and so this this really brought it down and we have, you know great results with it But I always tell people like if you can get the prescription of lukewarm That's always like my preference, You Know, that's where the research is and that the preference but this is a great

alternative if You can't get it Yeah, now two things.

Emphasis is spelled differently than many of you may be furiously typing. It's E-P-H-Y-S-I- S dot com. Yes, right? Yes. Okay, that's number one. I just have to say that.

Can you just tell me one more time why that name? Yeah, we were looking more at that in the Latin form of that, and it was really becoming true. And we felt that a child who was able to access this intervention, really we could see more of their potential, like their true potential there.

So that's kind of where it came out of, that route. And I, too, of course, want to save people money. I always talk about my girl from West Virginia status.

And so prescription Leucovorin if we can get it. But we have to keep in mind that some of the conventional pharmacy forms of Leukovorin actually have lactose or milk in them, and some the best forms were removed from the market.

And so it is very important that you look, especially if your child has a bad reaction to leucovorin, that look at the package insert on the formulation you got and see what else is in there besides folinic acid.

Yeah, and so that's also what I see, too, is when some people are saying that their child becomes agitated or irritable with prescription leukoborin, looking at the brands that they're actually using.

Dosing, soluble folate receptor findings, and Borrelia link

Because not only can there be lactose in it, but there can be dyes. in it, there can be corn in, and so some of these excipients are really agitating to our sensitive kids' nervous systems, right?

And so it's not actually the folinic acid, it is the additives to it. And, so, those children then might do well with compounded leukovorin or trying just a straight calcium folinate.

The other thing to be mindful of is when you go and look, say you're looking at a nutraceutical brand that you can get over the counter, is to make sure that it really is just true calcium folinate.

There are some combination products that have additional things in that are good, but when really ramp up the dose, you might be getting too much of those other ingredients that could be also stimulating to the system, contributing to agitation or irritability or sleep disturbances.

Right, absolutely. And with our kids with vector-borne diseases and mold mycotoxin disease, we have so much mast cell activation that these kids, not just sensitive from a texture standpoint or, you know, from other symptoms they have, they may be sensitive to all these excipients, preservatives, additives that you're talking about.

So that's true with nutraceuticals and definitely true Yeah. And when you get to the compounded version, again, most of our families don't get that covered by their insurance.

So you really have to look at the cost of that versus one like Emphasis or others that are pure salinic acid, as you're talking about. Yeah, so important.

So, just going again one more time to the vector borne diseases, are you now looking at most of the kids who come to you with neuropsychiatric symptoms?

Are you looking folate receptor antibodies and vector-borne diseases and all of those? I know, I knew the answer to this question. Yes. And I feel like that's kind of what made our practice stand out differently, at least in children with pans and pandas, right?

Because we're on the East Coast, we do a very good job at ruling out vector borne disease, and it is extremely

prevalent. I would say over 70% of my patients come back positive, but I do think it's important with any type of neuropsychiatric symptom to also be looking at the folate receptor autoantibodies, just because I've seen it be so helpful for those symptoms in particular, where obviously we need to address the underlying infection and we to bring down the inflammation and support the immune system.

But the big piece is also supporting the child to get their symptoms down, to give relief for them, putting in support for those symptoms like, for instance, conventional like SSRIs.

First of all, we know our children with pans and pandas can be sensitive and more likely to have side effects, but it's also possible that if they have these folate receptor autoantibodies, they're not going to respond as well.

to the psychiatric or support that we use for mental health piece and neuropsych symptoms. And hopefully, this could be actually a big, not a little, support to get those kids relief from the symptoms and even maybe make the other interventions that you're putting in more effective.

Absolutely. Whether it's autism, vector-borne diseases, or other children with PANS-PANDAS. Yes. Yeah, and I think that the other thing that I just wanted to mention is that this particular test, the folate receptor antibody test is not overwhelmingly expensive.

You know, with the accurate, externally validated specialty labs for vector-borne diseases, it is a big expense for a lot of our families and we understand that.

But we have a lots of other ways to diagnose it. Symptoms. Exactly. You know, really. And you know I support the naturopathic perspective of using herbal medicine in our kids because so many of them in both of our practices have vector-borne diseases, don't have just one, have two, you're talking about multiple antibiotics.

In addition to that, when you are doing all the studies you can tell a lot just by the symptoms. Just so that people who maybe haven't watched other podcasts where we've talked about this a lot.

Let's just mention just a few of the symptoms we see with first Bartonella. Just talk about the top five or so. And now I think the number one is like a child who is aggressive, angry, you know, maybe they're self injurious, but I truly believe that all children like want to be good and they want To do well and They want, You know to Be happy right like they are so pure and innocent and when a Child is angry and aggressive like that is not a natural state for them and you have to roll out Bartonella, but I see a lot of OCD, anxiety, as well as like foot pain or heel pain.

So sometimes even you wonder about our kids with autism, right? Walking on their toes, is there something going on where it's painful to walk with their full foot on the ground because maybe they're having heel-pain there.

Those are big ones I And very slow processing. I think Bartonella is much slower processing than some of the others. And of course, the striae that blanch, if you see that, that don't follow the dermal lines that are either more horizontal, vertical, and anywhere on the body.

But yeah, those are the… And the daily flare. So much of our strep-induced or mycoplasma- induced are episodic, whereas our Bartonella kids are more like every day.

there's a flare or rage. And then what about babesia? Babesias, I see more of the dysautonomia symptoms with. So temperature, dysregulation, maybe these are the kids with blood sugar dysregation, where if they stand up, they might complain about getting dizzy.

Testing strategy, Bartonella and Babesia symptom patterns

Then also ones with shortness of breath, but little kids, that can't explain that. I feel like that's even hard for an adult to explain. So you might just see that, you know, their endurance is less than their peers.

Something changed, where they're just not keeping up with their pairs as much, or they need to take breaks, they

are actually starting to avoid being active because of that sensation.

Another one I see with that can be like breathing ticks, which sounds interesting, like they might breathe in and like hold their breath just to so they can feel like their getting enough air in.

I've also seen kids with yawning ticks that have Babesia too. Sweating, inappropriate sweating, so you see that a lot at nighttime, but that can also be during the day too, just inappropriate.

A lot of stomach aches and headaches with Babesia, and I actually see a tremendous overlap between autism and Babessia too. So, you know, with a child with autism, I'm ruling out all vector-borne diseases, But I am seeing a big correlation, at least in the last, five plus years of more Babesseia coming back.

And we know that it can be congenitally transmitted, all of these, as well as… gotten from all types of vectors, not just ticks. So absolutely. And I think also the dysautonomia can sometimes often be what I've presented on, the Alice in Wonderland syndrome, that really misperception either sound sensitivity or visual distortions or some type of distortion in their senses, I thing is the other one.

Yeah. Yes, sensory sensitivities is a big one, especially the sound. It's so interesting to me that sometimes it's like one person's voice bothers them.

You know, it is not like all female voices. it just like this particular, you know person bothers that. And it amazes me. I'm laughing because for several of our patients it has been me, and I get notes from moms before they come in.

Remember, Dr. O'Hara, you need to just whisper, so I'm at voices. I take that, but anyway. Or there's like a particular sibling, that they're fine with the other one, But there is one sibling which is so hard in families, especially for that sibling maybe or that particular individual.

Right. Dr. Wells, I could talk to you forever. You know that. Two other upcoming podcasts that I just wanted to, that you're going to be involved in, and that i just want to talk about very, very briefly, is one, looking at the scope of practitioners.

I think it's important for our families to understand all the different types of doctors that are out there and you know I'm not here to say by any stretch of the imagination that MDs or DOs are better than anybody else because I think there are so many practitioners that can do so much for our families.

Naturopathic physicians, being very, very high among them. But there are even differences between naturopathic physicians and natriopaths that are trained in less rigorous ways, let's say.

So we're gonna be together with other of our colleagues talking about that. And then the last one that I'm excited about is just answering your questions.

Dr. Wells has agreed to be on with me because I don't have all the answers. And neither does she. Yeah, neither. Though, as I often tell people, she's me 2.0. And I take that as a compliment, whether she does or anybody else does, or not.

But anyway, but I think it's important to get at least a couple of perspectives. So we will be taking questions, and we'll be doing that in an upcoming podcast in the next few months.

Dr. Wells, any last words you want to leave our families or other practitioners with of hope, of your experience, Yeah, the last that what I would leave with is essentially just looking for the folate receptor alpha-auto antibodies because I really do see that this could be a significant, you know, piece of a child's puzzle, not the whole thing, but a component of it and might be one of those missing links that like just gets you further and it helps to stabilize and decrease the severity frequency duration of flares that we see.

So any child that's presenting with neuropsychiatric symptoms, even adults, although we haven't studied that

because we don't see adults in practice, is really looking for this and then asking your provider to consider a trial of the high-dose fulanic acid.

And I just hope it's going to be helpful for your child and your family as much as we do in our practice for our families. Absolutely. So we told people how to find emphasis.

How did they find you? If they want really an excellent practitioner, somebody who gets it, someone who listens, how do they found you.

Closing thoughts and where to find the guests

My website, lindsaywellsnd.com, but then also I try to post information on my Instagram just about all things Panzer Pandas and vector-borne disease and I broke down all of our research and so there's some information about that on there and that's at Lindsay Wells ND.

I'm not very creative. It's all the same. Lindsay Welles ND! And it's Lindsay with an E. Yes. And yes, many of my mentees have said how much they enjoy your posts.

So if those of you listening or watching haven't seen them, LindsayWellsND and Lindsay, thank you so much for joining me again today. Thank you for having me.

We'll see you next time on Demystifying Pan's Pandas. That's it for today's episode of Demystifying Pan's Pandas. I hope you're walking away with insights, tools, and hope to help you and your child on this journey.

If you found todays conversation valuable, be sure to subscribe so you never miss an episode. Share this podcast with anyone who might need it. It could be the lifeline they're searching for.

And if you have a moment, leaving a review helps us reach even more families who deserve answers. Also, for more information, training, and community, check out our website, drohara.com and join our annual membership.

And remember, every step forward, no matter how small, brings us closer to healing and understanding. Until next time, be present, Be hopeful, And we look forward to seeing you next on Demystifying Pan's Pandas.