When Mental Illness Isn’t Mental: How Tick-Borne Infections Masquerade as Psych Disorders Transcript

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Introduction and guest background

In the context of what I think is Bartonella infection, where we do like we find evidence of Bartonella in the blood, and all we're seeing is like, like fully blown anorexia where they're like admitted to a hospital for like a whole year because of anorexia.

Yeah. So I feel like I've seen I've seen such varied like manifestations related to Bartonella. And the only way like we can ever be convinced is if we go forward with Bartonella treatment, and we see people getting, like, much better.

This is doctor talks. Real talk from real doctors on the issues that matter to you most. Hi, everybody. Doctor Nancy O'Hara and I am so thrilled to welcome Doctor Shannon Delaney.

Shannon, I'll just say a few quick things about her. She got her medical degree from the Medical College of Wisconsin. She completed her residency at Harvard, did a clinical and child adolescent psychiatry fellowship at Columbia Cornell, a three year NIH sponsored research fellowship at Columbia, and was studying immune and infectious biomarkers of psychosis with Doctor Brian Fallon, as her mentor.

And then she joined the faculty at CMC in 2017, doing clinical and research work and specializing in seeing kids and adults with complex neuropsychiatric presentations.

And then in July of 2023, started her own private practice in Manhattan and, you know, I first started working with Shannon when I invited her to speak at the Medical Academy of Pediatrics and Special Needs, and she did a wonderful presentation on tick borne diseases.

And Shannon, just thrilled to welcome you and have you join me on the podcast. Yeah, thank you for having me. I'm thrilled to be here. Yeah. And how in the heck did you get into treating children and young adults with complex neuropsychiatric presentations related to infections?

How much time do we have, exactly? So it's a little bit of a long story, but I'll try to, like, make it brief and just talk about a little bit of the highlights.

But the story goes back to when I was in residency as a psychiatrist and when I was in fellowship, seeing kids and as psychiatrist as part of our training, we have to work in a lot of different settings, including the hospital.

So when we're in the hospital, we do what's called consultation liaison work, which means that the doctors who are taking care of patients, if there's a like urgent psychiatric question or there's like a psychiatric contribution to whatever's going on with the patient in the hospital, I'm talking about like medical hospital, not psychiatric, then they will call the psychiatrist to come in and give their input.

So during my psychiatry residency in Boston and also my child psychiatry fellowship in New York, I encountered a lot of the same sort of scenarios where we would be consulted to basically give our opinion about these, like complicated medical things that are going on in the typical patient with somebody who had a complicated history.

But there was no, like, real medical answers. And so then they would do this million dollar workup, they wouldn't really find any answers, and then they would call the psychiatrist to see the patient.

Imagine how happy the family or the patients were to see the psychiatrist in that setting. But we would complete the full evaluation.

How Shannon got into infection-related psychiatry

And I always found myself kind of at odds with what the psychiatry team, usually the psychiatry attending, was thinking about the case, and they would often, not always, but they would often come up with like a psycho analytical kind of bent on their interpretation of what was going on, even if it was very, very clearly medical, like they had left sided weakness, or the kid was throwing up with like a significant GI issue.

They would always somehow make it psychological or make it stress, or make it psychiatric. Even when there was no overt psychiatric symptoms, they were just blaming the medical issue on stress or psychological things, basically, oftentimes even going a step further and calling it a conversion disorder.

Yeah. Saying that all of their symptoms were related to some unconscious psychiatric thing going on. And that was super frustrating to me because I heard that same story that they heard.

And I was not thinking that that was the answer to what was going on. And so then I thought, well, maybe it's kind of a regional thing because I was in Boston.

And then the same thing happened in the setting of kids when I was doing my fellowship, when I came to New York. And so at that point I was like, okay, there's there's obviously like something here, there's something complicated here.

And so that at that point I decided I really wanted to do more research to kind of figure out what was at play. And at that point, I was living in New York, and so I was already a part of the Columbia Cornell system.

And I found out about a research fellowship where you can basically kind of create your own project. So that's what I did, where I was looking for new and and infectious biomarkers related to psychiatric disease.

And I found the perfect mentor, Doctor Brian Fallon, who made his entire career studying neuropsychiatric symptoms related to Lyme disease. And so I learned a lot about Lyme disease in the process, because I would go to his lab meetings and learn about Lyme disease while I was doing my side study, and he was my mentor.

Wow. That's kind of the the longer version of how I got into. That's how I then learned a lot about Lyme disease. And then once you learn a little bit about Lyme disease, you're kind of like tied in.

You can't just stop there. You just have to kind of keep going. Yeah. Do the deep dive. Well, we're thrilled to have, you know, those of us who are in this field just to have a psychiatrist like you who gets it.

I remember one of the first kids I saw was a kid that was in a tertiary care hospital and was diagnosed with conversion disorder, even though on their hospital labs he had mycoplasma asthma, and they wouldn't even treat the mycoplasma because he didn't have any respiratory symptoms.

And they just called it conversion disorder. And we saw him a few months later. Still, of course, with all the symptoms treated as mycoplasma. And lo and behold, the conversion disorder went away.

So, you know, we know the stories over and over again. So anyway, just such gratitude for for you looking in that way and and finding the mentor and doing the research.

And you know, we both live in, in the northeast where you and I are seeing tons of tick borne disease. One I want to talk about, because you just published in frontiers in 2024 on Bartonella.

So can you tell me a little bit about that? And and let's talk a little bit about Bartonella. Yeah. Well it's interesting I just told you how I got into Lyme disease and I, I was at Columbia for many years.

I started on faculty in 2017. That's when I got my first real job. And in my late 30s, which is kind of late, to be getting your first real job. But that's what happens when you're studying. Yes, but I have, even though I've been doing this

work for a long time related to Lyme disease and tick borne illness, I have to say I've only gotten like a real appreciation for how difficult and complex Bartonella is as an infection in the last couple of years, few years, I would say.

And we did publish a very interesting study. And I'll just tell you a little bit about it. So basically, remember I told you about the research fellowship I was doing looking at immune and infectious biomarkers.

And so this is really before I was in the Lyme disease space. But I was interested in finding out psychiatric, infectious and immune contributions to psychiatric disease.

And in particular, I was interested in psychosis because NMDA receptor antibody encephalitis had just been basically discovered during my intern year of residency.

That's another reason why I was kind of primed to do this work, because I thought, this is so fascinating that we have an autoimmune condition where most of these patients first present with psychosis.

And there's a very specific like neurobiology to their psychosis, which like, doesn't exist in the rest of the psychiatry. And so that's why I was really interested in that condition.

And I started to think, well, maybe there are a bunch of people with psychosis who are stuck in psychiatric state hospitals places, and they actually have an autoimmune cause to their own cause to their illness.

So I decided that I would do the study. I actually a few people thought I was crazy because like, normally you find a mentor and you'd like do their work and they have like a study like ready for you.

And I was like, no, no, no, I want to do this study. So I recruited patients with psychosis from the New York, the general, like New York City area, and I recruited there's a few different groups in this study.

So there were adults with psychosis who were just, like, randomly recruited. I think I just put like, we had a website on the Columbia system, so whoever saw it would kind of reach out.

And I, I was recruiting both kids and adults with psychosis. So those are two groups. I had what's called a prodromal psychosis group. So they had a prodrome like an early psychosis clinic.

And yeah, and so that was a different group. And then the next group was basically kids and adults who were otherwise healthy, who had no history of, of psychosis whatsoever.

So I did like very comprehensive psychiatric evaluations on everyone in the study. And then I also collected whole blood and plasma and serum on everyone.

And I just stored it in the freezer. So then fast forward. So I had a bunch of samples stored in this freezer for many, many years. And Doctor Ed Bright's worth, which, yeah, you know about.

And most people probably know that he's a preeminent Bartonella researcher. He published a study, I think this was in 21, 2021. And he had a very, very small what's called a case control study, where he had, I think, maybe 14 patients with schizophrenia or something like that.

And then he had, I think, eight healthy controls, and they were looking for the presence of Bartonella bacteria and also Bartonella antibodies in those patients.

And they found like 65% of the patients with or the participants with schizophrenia had Bartonella in their blood, which was like boggling. And so I was like, wow, that's like an amazing study.

But it's small. I have all these samples in the in the freezer. We should probe them for Bartonella. So I contacted Doctor Ed and that's sort of the that's the origin story for the, the study.

And so then it was just like a year.

Bartonella research and psychosis study

It was like two years ago, probably that I sent him all the samples on in an unblinded fashion, and his lab did all the work in the analysis for everything.

And we found some really exciting results. So what we found in looking at the adults with psychosis and again, my, my participants, they could have a history of bipolar disorder with psychosis, or they could have a history of schizophrenia or just like unspecified psychosis.

So it's a little bit different from his study which was looking at patients only with schizophrenia. Right. And we found that 43% of the people with psychosis from my study had evidence of Bartonella in their blood, which was like, again, surprisingly high.

Now, were those all adults or children to that 43%? That was only adults? Okay. We actually didn't. There was no difference in the kids with psychosis.

There's they were a much smaller group, the adults I think I had like 44 and we had like maybe seven kids with psychosis. Okay. But we didn't find any Bartonella in the kids with psychosis group evidence like PCR positivity for Bartonella.

Okay, okay. Okay. Yeah. Keep going. Yeah. I'm just going to say for the, for the so obviously the biggest comparison group is looking at adults with psychosis compared to healthy control adults.

So that's what we did. And we found that 13% of those who the healthy control adults had evidence of Bartonella in their blood. So statistically very significant 43 versus 13%.

Right. Although you may wonder like ask yourself, well, that's kind of a high number for healthy adults to have Bartonella in their blood. I don't know how, but.

We know there's, you know, 41% of our ticks contain Borrelia, Bartonella and Bbca in this area of the country when that was last looked at, at least in Connecticut.

So people are getting Bartonella. And it's a question of how the, you know, that is affecting them now and that 13%, were you looking at anything besides the psychosis?

I mean, are you going back and studying that more to see if those neurologically or psychiatrically typical people had other Bartonella symptoms. So unfortunately, this the timing of the study coincided with right when I was leaving Columbia.

And I don't have access to that study or because I don't work there. So no, we haven't been able to follow up in that way. And the study had to close because I was the principal investigator and I left.

So that's the important part. But hopefully in the future we can, you know, do more of those studies that will give us more information. I mean, the other like interesting and complicating factor here is that if you look at the antibody positivity between the two groups, there was no difference between the two groups and actually the adults.

The healthy control adults, 75% of them had Bartonella antibodies, compared to 56% of those with psychosis. So that's the other interesting angle here.

It's like it's almost ubiquitous that people are getting exposed to Bartonella. So what is the driving factor? Maybe if like depending on how much of the psychosis is actually Bartonella related, then what is causing someone if so many people are exposed to Bartonella, then why do only some develop psychiatric symptoms?

Right? Right. And also what does that tell us about the immune systems? You know, that's something that that we often talk about that that the, the tick borne diseases themselves cause immune dysregulation or immune deficiency.

And so if all we're measuring is antibody response to these diseases, how much of these diseases are we really missing? I think probably a lot. You're. Yeah.

Actually, I, I've been meaning to ask you when I usually see Bartonella present itself clinically, I would say the vast majority of the times maybe like 75% or more.

It's usually in the context of getting a different infection, like a different secondary infection, whether it's like influenza or Covid or whatever else, or sometimes even strep actually.

And I do the full workup. They were like clearly sick with something acutely. But then I do the full workup. I find evidence of Bartonella I like specifically treat for Bartonella.

And then I see them get better. So I really think that Bartonella is like basically acting in a very opportunistic way and that. I also agree, especially post-Covid.

But but even with a lot of other viruses, I mean, we see it so much, I mean, a minimum of what what should we we looked at our numbers, and I think it was 43% of all comers with pans or pandas in our practice had either clinical or blood test proven Bartonella that improved with very specific Bartonella treatment.

So yeah, I, I totally agree with you, but all right. So so, you know, and I've never seen a conventional lab positive Bartonella test in my clinical practice, you know, one.

Okay. You know, so, so as a clinical diagnosis, what are you looking for? To say? I'm thinking about Bartonella. Just because so many people that may be listening or watching us don't know what those symptoms are or signs.

Yeah, it's a good question. I mean, the vast I think I mean, obviously I'm a little bit biased because I'm a psychiatrist. So I see a lot of people who have primarily psychiatric illness that are coming from these infections.

So there might be a whole like sub cohort of patients who like, don't have any psychiatric symptoms. And they have Bartonella just presenting in a like a more medical fashion.

And I do some see that too, by the way. But because of just like my training and being a psychiatrist, I see a lot of the psychiatric symptoms. So it would be good to get your input since you're not a psychiatrist.

If you're like, what percentage of people that you're seeing that present only with psychiatric symptoms? But in my domain, I would say, it's hard. I'm just like roughing it.

But I would say maybe 50% of the people have only psychiatric symptoms. And the other 50% maybe have a complex like what I would say is like more medical, neurological, plus psychiatric related to Bartonella.

And I can kind of see everything across the board. I mean, I see a lot of OCD is like I see OCD all the time and I see a ton of psychosis in particular related to Bartonella infection.

Yeah. The the one bias, though, is now I have people reaching out to me because of the paper who were like, hey, I have psychosis and I think I have Bartonella.

And then we find it when we do the work up. So, right. That's, that's the only the one caveat in that like subsection of people do, some of them also have like a lot of fatigue.

Do they have brain fog problems thinking, yes, I see all of that too. But in particular, for a lot of the kids, I can see them just presenting with the psychiatric type symptoms.

So with Bartonella, again I mentioned psychosis. I can see that a lot. And by the way, the psychosis can be like dramatic, like they're totally fine. No history of psychosis.

They wake up one day and they're just like thinking and doing very, very strange and very, very irrational things out of the blue. Yeah. And it's usually like right after this, like within days or weeks of having like a different infection, like I said, maybe strep or influenza or Covid.

But I've also seen like I've seen anorexia in the context of what I think is Bartonella infection, where we do like we find evidence of Bartonella in the blood.

And all we're seeing is like, like fully blown anorexia where they're like admitted to a hospital for like a whole year because of anorexia. Yeah. So I feel like I've seen I've seen such varied, like manifestations related to Bartonella.

And the only way like we can ever be convinced is if we go forward with Bartonella treatment, and we see people getting, like, much better. And I see that a lot.

But not everyone responds to Bartonella treatment. But I would say the vast majority of people do respond. And sometimes they respond really dramatically.

Yeah, I, I so agree with you. And I think the things I would add to that is, you know, because we're coming at it from a pandas perspective, that's why people come to us.

The most of the kids with pans, pandas, the flares are episodic. They come and go. Whereas with the Bartonella kids it's almost a daily flare. Like like it's it's all the time, more than any of the other triggers know.

And the other one is rage or aggression or self-injury. It's like their their psychosis or whatever is going on for them, takes them more to that response.

That than some of the others that I see. I don't know if you're seeing that. Yeah, 100%, I was going to say, but like, I'll I'll see a kid, you know, a second grader or something like that, like a seven year old who was like functioning fine in kindergarten, in first grade, and then all of a sudden second grade.

And they're like running out of the classroom. They're like trying to hit the the teacher or like, beating up their parents. I'm like, oh, this is like classic Bartonella infection.

Exactly, exactly. With Marcela, like, I you I always find it when you hear a story like that where like out of the blue aggression. The other thing I didn't mention is suicidality, like aggression and suicidality.

And this, like, very extreme, like personality change, behavioral change. That's like Bartonella all the time. Absolutely. And then, you know, some of them will get the blanching stretchmarks, some of them will get the the heel pain or the sole pain.

I I've told this story before, but I remember one of the first times I was in Australia, the doctors there were like, we don't have Lyme disease. I'm like, yeah, you do.

And no, no, no, we don't have Lyme disease. I'm like, you have it. And the next kid that walked in was daily raging and all this sensory, what they were calling sensory stuff.

And I'm like, this isn't sensory, this is Bartonella. And they're like, nope, we don't have Bartonella. And I said, well, what other symptoms?

Clinical signs of Bartonella and testing approach

And he said, well, I ball up my socks in the bottom of my shoes because it hurts here. And he was pointing to his soles like Bartonella. And they're like, no, it's not Bartonella, it's just another sensory thing.

And I said, anything else? And he goes, well, I got this rash. And he pulled his shirt up and it was, you know, the the stretch marks of Bartonella. And I think we we just have to know about these as clinicians and as parents to try to figure this out because the testing is so I don't want to say controversial, though it is difficult.

And when you do testing, Shannon, you're doing conventional lab testing. And then also any specialty labs that you particularly use. Yeah. So usually I do kind of a full workup for some of the more obscure things that you can get.

And I do a lot of that work up in the immune work up through quest. And then I use I always use medical diagnostics Lab, which is a specialty tick borne illness lab out of new Jersey because they take insurance.

And I really I actually like their Lyme testing and their Bartonella. They can only do one Bartonella antibody tests. Bartonella. Hensleigh. And I think that they're Lyme testing.

And their Bartonella testing is more sensitive than anyone else, in my opinion. Even even than Gen-X. And then I usually recommend both the BSE and Bartonella fish tests from identical, at the very least.

And it depends on the sort of the person in the family. If they come to me and they say, hey, I want all of the like as much testing as you can and money isn't really an issue, then I usually recommend the for immuno blood testing from again on top of the two fish tests.

So that or testing that. Sounds very similar to us. And and then when you're when you're treating these kids are you you you think it's Bartonella. Are you starting the treatment before you get the test results back?

And what are you often starting with? So I usually well it depends on the, the patient if they like have not had any treatment so far and it's been like a few years then I just like let's just wait two weeks until the bloodwork come back because it just makes it'll be a more informed decision, right?

Granted, if the kid is like if there's a very high suspicion they're coming from a tick-borne endemic area, they have classic either Lyme or Bartonella like classic like 100% slam dunk.

And they're not functioning. Then I usually would start them something recommended for like pans. Assuming they fit that diagnosis, I would start something and then follow up in a few weeks when the labs are back, and then like, modify or tweak as necessary is my general approach.

And usually I would say like 90% or actually even higher, maybe 95% of the time when it's like a high clinical suspicion for these patients. Like with that, the that bloodwork that I described, like I usually find positive tests. Yeah.

So it's like so that part is nice in the sense that even though the testing is like so insensitive across the board, if you're doing the correct tests like I, I feel pretty reassured about the testing.

Yeah. Absolutely. Absolutely. Now I use a combination of antibiotics and herbals. Can you speak to that from your perspective, from the patients that you see using one versus the other, versus both?

Yeah. So I do the same. I would say I use both antibiotics and herbals sometimes with kids, I would say depending on the situation, I might use a little more antibiotics than herbals, depending on like again, kind of depending on the situation, I sometimes like to follow up with herbals after like an aggressive course of treatment with antibiotics for a few months and then follow up if everybody if everybody is feeling okay at that point, then transition to herbals.

But for a lot of my adult patients who are really, really sick, I often have them both on antibiotics and herbals at the same time. I mean, I'm a huge fan of of herbals.

And if I could treat everybody with that, I would, because I think it's just much better overall. And you don't see the like massive GI problems. And it's just like boosting your immunity.

My only downside with herbals is that sometimes, like, I don't think that they're aggressive enough for some of the, the patients that we see. But I do like.

Yeah, yeah, yeah, I hear you and and also in children trying to avoid Horkheimer reactions for example starting herbals very low. I often start at one drop at a time.

And and building them up. While I may be more aggressively treating them with antibiotics, as you said, and build that up slowly so they're at a fully tolerated dose when I'm ready to to wean the antibiotics.

Yeah. That's my yeah, I agree some of the depending on the patient, like some people can have a massive Herc cyst from just like one drop of herbs. It's like I do believe. Yeah, exactly.

And and I think, you know, it also speaks to that this is a multisystem disease. Whether it's Bartonella or one of our other tick borne diseases. It's not just an infection.

It's affecting the immune system. It's affecting the gut. It affects the detoxification system. And so as much as you and I are talking about antibiotics, wearables or anything else, it's a a full multi-system approach.

I think that that needs to happen. Yeah. Totally agree. So okay, we talk to you about Bartonella a bit. What about other tick borne illnesses? What else are you seeing?

What else are you testing for? What other neurosis like symptoms are you seeing with Borelli or Bobbsey or any of them? Pick one. So yeah I would say that I, I kind of see sometimes it's honestly hard to distinguish between Borrelia, Bartonella and, but yeah, I would say that the ones that we picked out though like psychosis and rage I would say are like particularly unique to Bartonella.

But other than that I can see psychiatric symptoms emerging across the board and all of the other tick borne illnesses, like, I would say, the biggest like symptom that I see.

Well, obviously anxiety, depression is kind of the biggest. And then shortly after that is like OCD. So many people come in with OCD, especially kids.

Yeah, the context of these infections, in terms of what else I see, I see a lot of Berbizier to like. It's one of those things like if you look for it, you're going to find it in the sense and it's important to look for it.

And I hadn't always been doing the Berbizier fish because I try to like be conservative about from a financial standpoint, whenever I can. But I think it might be a disservice to not like, check the Berbizier fish on everyone, because even people who are presenting with what I would, would have maybe guessed to be Lyme or Bartonella.

They fool me sometimes and they'll come back positive for Berbizier fish and I like wouldn't have guessed it necessarily because they're not presenting with like a classic Berbizier picture, not seeing the shortness of breath, not seeing the air hunger, not seeing the night sweats.

But they have Berbizier. Yeah. That's one thing that I started testing more of just because also it's just like such a different treatment path. So it's important to know like if it's there because then we want to go forward with a different pathway potentially.

Exactly. And I saw that actually in my own son I it was always Bartonella, Borrelia and post-Covid all of a sudden without any of those symptoms, it was Berbizier.

And I think you're absolutely right, especially now. And I my sense at least, is that we're seeing a lot more in the last 3 or 4 years than I saw in the years before that.

And I don't know how much of it is related to Covid and Covid induced activation or reactivation. Are you seeing that at all? Or or you know that maybe an increase in the doses?

Yeah, I think it's a little bit of a function of me in the beginning, maybe not testing for it as right. I mean, I do Berbizier testing through quest, which does pick up Berbizier, but I think I genex Berbizier testing is just much better overall.

They're looking at different Berbizier strains that like for example, quests in other labs can't do. I think we're seeing so many like prior to Covid I was in this world, but I wasn't as immersed in this world.

So it's hard for me to have like a full perspective on that. But I see so many people who are presenting, like with tick borne illness type symptoms in the setting of what they think is long Covid like.

I see it all the time. So my personal experience is that a lot of the people, a sizable portion of people who are diagnosed with long Covid, probably have tick borne illness at play.

Yeah, that's my opinion. Absolutely, absolutely. And as somebody who was mired in this disease pre-COVID and mired in it post-Covid, I, I, I wonder how much is Covid related reactivation.

And then the other one is, is baby the baby OTA coli, can you talk about that at all or your perspective on that as maybe cross-reactive with what we see as maybe the busy and uncanny?

Treating Bartonella and other tick-borne infections

Yeah, I mean, the babysit uncanny thing is just kind of perplexing because they can't really find the baby here. Duncan and the ticks as much the the first frustrating piece about Nikolai is that I know, like, I think T labs can pick it up, right?

But like even identical testing, they can pick up a bit the families, but they're not picking up the specific strain for E.coli. Right. So I think that as the science gets better, we'll just be able to like identify these things a bit better.

But I but I do think that it's part of my that I would actually I is part of the reason why I just started doing more regular ABC fish testing, because I think that oftentimes that's what we're picking up probably in the fish is.

A positive and one that that you test on several of the patients we share together is Brucella. Tell me what you see with brucellosis, what what you're looking for, why you test for it, anything you want to talk about.

Yeah. So I one of the reasons that I test for it is because I started testing for it, and then I started getting a lot of positive results, frankly. I mean, there's some question and I think in the tick borne illness community, whether or not it does exist as a tick borne illness or not, that's number one.

So that was like enough rationale for me to start testing it. Then once I started testing it, I started getting, I would say maybe 15 plus percent of the people positive.

So then it was a blessing because it's like if I have like 15 or 20% of the people coming back positive for this, what is actually going on? I mean, if it is a tick borne illness, that would make sense.

But if everything you read about it says, okay, the only way you can get this basically is drinking from drinking unpasteurized milk. These people don't have this history at all.

None of them are drinking unpasteurized milk. So why are so much positive brucella? So my best guess, and it's ironic because I'm like like you, I've basically never seen a Bartonella positive test through a lab like quest or lab core.

I've seen it once, but through quest 15 to 20% of the time I see these Brucella antibodies positive. So I think that it's picking up. I think it's cross-reactive with Bartonella because they're very interesting, similar or so it's picking up Brucella or Bartonella I think even though their Bartonella test is not picking up Bartonella, but I think that it is and.

You treating them in that way, then when you get a positive brucella, are you treating them as if they have nella, you know, from an antibiotic or herbal standpoint?

Yeah. So most of them, I would say the vast majority of people who are Brucella positive, pretty much everyone is Bartonella positive. So that's another reason why I think it's a cross reaction.

I don't know that I've ever seen anyone only positive for Brucella maybe like once or twice. And they're negative for Bartonella through the other labs.

So that's number one. Number two is that this is such as you know, it's like such a complicated and like controversial area of medicine to practice in, but especially since I'm a psychiatrist, I feel like if I'm aggressive with treatment, like the rationale has to be like rock solid.

And the one reason, the other reason that I really like testing for Brucella is that there's recommendation for treatment for Brucella, and it happens to be the same recommendations for Bartonella, which is doxy and rifampin.

So it's like one of the only areas where we actually have like guidelines to follow. So that's that's the real reason why that's for Brucella. That's great.

And it's important because as physicians we want to have documentation. And in addition to our end of one or our clinical experience. So that that's great.

I'm going to start adding it to my quest requests. Yeah. Let me let me know if you get the similar like 15% positive rate. Yeah absolutely. It'll be fascinating.

And then you know Borrelia we see a lot of processing issues, brain fog issues with Bartonella and Borrelia. Do you see anything differently with that or how about Borrelia Miyamoto or you know, anything differently Psychiatrically that you wanted to mention?

Well, first of all, related to the like Borrelia versus Bartonella, I, I agree, like, I you usually see more when you hear a story of like fatigue, brain fog, like memory problems.

That to me sounds a lot more like Lyme than Bartonella. For example, if so, that's like one of the sort of things I use to distinguish like from a clinical perspective.

But I just saw someone today, actually, who was like a teenager. Her only presenting symptom was psychosis, actually. Like no fatigue, like no brain fog, really at the time.

And she was maintained by her pediatrician who put her on Doxy just started putting her on docs, even though she had no positive like testing whatsoever.

She got much better. But then she relapsed every time she went off of Doxy. So then the pediatrician was kind of at a like at odds and didn't know what to do with her.

She was much better, but she would still have these, like, psychosis type symptoms. So I evaluated her. I did the full workup. I thought for sure I would find Lyme and Bartonella, and I only found Bartonella.

I added as if through mycin to her doxy that she was taking, and she started having all of these, like, brain fog. She was like within the first week of adding on the zipper, missing a week or two.

She was super freaked out because she all of a sudden had these short term memory issues. You know, like someone with dementia would have. But she's a 14 year old and she's undergoing this treatment, so she was very scared.

Wow. That's an example of like I did the full testing. Also, all her Lyme was like solidly negative. But her Bartonella

was very positive. So I don't know, maybe this is only Bartonella, but usually that memory, like when I hear short term memory issues and like brain fog, usually it's like man, Bartonella, right?

Right. I agree, but I'm glad. Fascinating. I'm glad you asked about Birley Miyamoto though, because that was one of the that's probably my favorite tick borne illness that I got. And we do.

And the reason I got really into it is because when I started at Columbia as faculty, like after my research fellowship. So this is like circa 2017, I was learning about a test that they did for, well, I started seeing people too.

And so we were checking everybody for Borelli and Miyamoto. And this is back when like imaging. Do you remember that lab? Oh yeah. We were like using imaging.

And we started we started getting all these positives for Miyamoto. And I was like, okay, we need to like a check everybody for Miyamoto and like start tracking this because this is a big story, because no one even knows what Borrelli and Miyamoto I is. Most the average doctor has never heard of it, and they're not doing the testing.

And I was like, we're seeing so many positive here. Like, this is this is a good study. So that's what we did for the next few years. We just checked everybody for Borrelli Miyamoto I in the meantime, I think it was maybe right after this we published our study, but quest ended up buying imaging.

So that's and now quest is offering that Borrelli Miyamoto a test. And it's like I did before and afters. And I'm pretty certain it's the same exact test because, you know, with the same patient, we got the same results.

Yeah. Before and after the, the acquisition. But anyway, we did we actually did a study. We published a study a few years ago, I think in 2020 where we were looking at all comers who came to our clinic.

At the time, we were just doing a consultation clinic, and it was everybody who was coming in with suspected tick borne illness. We just checked everybody and we found a surprisingly high number of people.

With Borrelli Miyamoto, I, like 26% were positive for Miyamoto. Wow. And then we looked to look at the profile. So what does Borelli Miyamoto look like compared to Lyme disease?

If we can like, really say this is a group we think only has Miyamoto like compared to one who only has Lyme disease. And they were basically indistinguishable.

The groups like, they looked very much the same from a neurological, medical, psychiatric perspective. The only difference is, is that we saw a pretty high rate of hospitalization in the Miyamoto AI group.

So maybe it's like 25% of the people who had Borrelli Miyamoto I had been hospitalized during their illness, which is pretty high. Yeah. And most maybe more aggressive than then.

Brett Bergdorf. Yeah. And others. Yeah, maybe more of a, like, aggressive illness. And they were hospitalized for various reasons, like neurological, some cardiac, you know, one was psychiatric.

The rest were medical hospitalizations. But other than that from like a clinical symptoms kind of indistinguishable. The only thing I've noticed in the Miyamoto AI group is that they can present with rashes, but nonstandard, like not your typical M rash, like strange rashes that do not fit necessarily a particular pattern.

So if you see someone coming in like I saw a woman a few months ago who, you know, she had like high fever, these strange rashes which were not in rashes.

And I was like, oh, this sounds like Miyamoto. And she ended up getting time for me and twice. So, so I would say that is basically if Lyme testing is negative.

Oh, by the way, this girl, she didn't get her test done yet. The girl I saw today who was oh wow. Yeah. Maybe she

has Miyamoto toy because that would actually make more sense because her Lyme test was negative.

But they haven't done their their quest testing yet.

Borrelia, Babesia, Brucella, and broader tick-borne illness

Oh, so she could have Bartonella plus the Miyamoto. And interesting. And I think for you know, this podcast hopefully is reaching some practitioners but there's certainly a lot of parents.

And I think, you know, we're talking about a lot of different types of tick borne disease. And we always talk about Lyme disease. But Lyme is essentially just Borrelia burgdorferi.

And there are dozens of species of Borrelia, dozens of species of of Bartonella, you know, several of bobbsey. And I think we need to change the way we talk about this and not just talk about Lyme disease.

We need to be talking about vector borne diseases or tick borne diseases. Do you agree with that? Yeah, 100% agree. Just a random aside, which I just find kind of fascinating, but it's not super practical information.

But going back to the Bartonella psychosis study. So doctor EDS group, obviously they're like the world's best like Bartonella testing like facilities.

And so they were able to do super sophisticated like antibody Bartonella antibody analysis and like PCR analysis of all the Bartonella. So in this group of patients with psychosis from New York City, we found two super obscure Bartonella.

One was Bartonella Roche la mia, which was from like Peru. And like super obscure. But we found that in the population. Another the second one, I'm blanking on the name of the other, Bartonella, but it was endemic like the only case report associated with it was written out of France, like some woman in her 70s.

That was like butchering a rabbit. And she ended up being positive for this other Bartonella that we found in our psychosis like population. So the point is that, like, once this testing that EDS lab was able to do becomes a little bit more mainstream, I think we're going to be picking up these like obscure Bartonella as there's because there's so many different species of all of these things that could be like playing a role in neuropsychiatric symptoms.

Right. And that that brings up one other thing I wanted to touch on, on how Bartonella is transmitted, because it's not just about chicks. Do you want to just mention that for a minute?

Yeah. And I was just having this conversation with this girl's family because I was like, this is a little unusual that I'm only seeing Bartonella, but I sometimes do see that in people.

Yeah. I personally think that most of the Bartonella that I'm seeing is probably through ticks, because I'm seeing it usually in conjunction with Lyme disease, too.

That being said, cat scratches, lice, flea biting flies, which I didn't really realize until like fairly recently. And also how spiders can all be like vectors.

Yeah. So when people say I don't go hiking, I can't have this Lyme disease or Bartonella, you know, there's so many other ways this can get transmitted and, and carried.

You know, you mentioned this one Bartonella from Peru. I was reading a study recently about it being carried on songbirds. So you know, where where these vectors are carrying the the underlying spirit keeps, you know, it's worldwide.

It's not just here in the northeast, even though we're we're bugged with it, a lot. Yeah. Well, I never it didn't dawn on me until, like, I don't know, a few years ago that I realized that birds can transmit, like, ticks right on birds, and then

they drop it.

It's like I never really thought of that. And then it dawned on me that, like, yeah, yeah, this is actually a big problem. This is how they spread disease.

Yeah. Exactly. And and another area I just wanted to mention because, you know, as I said, we are so fortunate to have Shannon as a psychiatry in this area of the country and as somebody as a resource.

But often our kids with pens and pandas getting put on psychiatric medications and, you know, you and I are very much in sync on our use of the motor gene in treating the OCD, if necessary.

And some of these kids, can you speak just a little bit about the psychiatric medications that you use, like Le motor gene as opposed to SSRI, etc.? Sure.

So my love for lamotrigine actually started even before I was doing this work in infections, just because as a psychiatrist, whenever I put people on it, I realized they would get much better.

Yeah, like pretty quickly I was like, wow, this is kind of a miracle medication. And then I started from the beginning of my career, once I started kind of working on faculty, I was always really doing work within infections.

So then I think I just started to be a little bit more liberal in using lamotrigine and trying it because there was like rationale, especially in these patients who had like a lot of rage, a lot of like suicidality, like, you know, depression, a lot of mood lability because it's a mood stabilizer.

And I started using it. I just saw such good effects from it. And that was the other reason I was sort of forced to use it is because I would so often get the story, people coming to me where they had tried SSRI eyes and they had like intense suicidality often, or they just felt very agitated on SSRI eyes.

And so I would still use as a surprise for a while. But I had so many experiences that even tiny, tiny doses of SSRI. I remember starting a kid, I think, on like two milligrams of fluoxetine or something like that.

Or maybe it was like even maybe it was like six milligrams of Zoloft. So like a force of like a starting dose and like the next day he was suicidal and I was like, wow.

Like, I hear that people coming to me. But then so now I don't regularly use SSRI for that reason. I don't take people off of them if they're doing really well on them.

However, because they can help, they can help some people, and there's no logic in bringing someone off something that's helping. Right? It's a little bit more leery about starting it.

Sometimes, just because I've heard kind of the same story over and over again. That being said, sometimes I would say like movie rocks can be maybe a little bit tolerated, sometimes better than like your typical like Prozac or Zoloft, in my experience in the OCD realm.

Also, I've seen some good responses with compromising in some of these patients who, like nothing else, is is helping at all. And we're trying to target the tick borne illness with antibiotics, but their OCD is just so extreme that I mean, can bring things down a little bit.

So that's sort of my general thought process about those like serotonin type medications. I do use, like I have better luck with like Wellbutrin, for example.

Psychiatric medications and closing advice

So targeting dopamine instead of serotonin can be helpful for depression. And like especially with fatigue and concentration problems. Yeah. All great choices.

And and you know, in in my world, and especially with the littler kids, I will often start with nutraceuticals, you know, and acetylcysteine lithium or irritate other things that may work in some of the, the kids.

And then you know exactly what you're saying. You know, I've seen so many good things with the motor gene. And if they're doing well on a low dose of SSRI is great.

But but some of these others, as you're mentioning, are terrific. Shannon, I could talk to you for another three hours about all of this stuff, but I do want to be respectful of everybody's time.

Is there anything else that you think people need to know about tick borne disease that they don't know, or anything else you wanted to share? I just, you know, I think we talked about so many, we highlighted so many important topics already.

I also, and I know that you do the same, is that like parents, if we're talking about like parents and children, situations like parents usually have a pretty good intuition about these things.

Like if they have a feeling that something biological or more like medical is going on based on sort of the abrupt change in their kid, I would just trust that and make sure you go to a doctor who's going to be willing to do this full workup and do the labs that we talked about today, because most of the time it's a very rare experience that like, if someone comes to me with a high clinical suspicion for either tick borne illness or pans, pandas, that we don't find something actionable, in my experience.

Yeah. So great advice. Find somebody who will listen. And and Doctor Delaney is certainly one of those. If people wanted to find you, how would they find you now?

Shannon. So actually the best way to find me is probably email, just because it's just a little faster, an easier way to communicate. And my email is my first name, Shannon Sha.

And then on at my last name, Delaney Delany, MD, as in Medical Doctor Dawg. Okay. Well, Shannon, again, thank you so much for all the work you do with our kids and adults.

You know, when I started my career, I was going to go into psychiatry, but I could never work with adults. So I have tremendous respect to for all that you do.

And thanks for being with us today and thanks for sharing all of your knowledge. Yeah, I had had a great time. Thanks again for inviting me on, and I'm so happy that we're so like minded in our approach to these difficult patients too.

Me too, me too. Thank you. See you all again next time. That's it for today's episode of Demystifying Pandas. Pandas. I hope you're walking away with insights, tools, and hope to help you and your child on this journey.

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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 time on Demystifying Gans.

Pandas.