Symptom management panel

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[00:00:05] **Paula Hardeman:** We'll get started. This is the panel discussion on symptomatic management for the rare neuroimmunology disorders. I will introduce myself because I don't think I've done that to the full group. My name is Paula Hardman. I am one of the PAs in the neuroimmunology clinic here at UT Southwestern. I have the privilege since he's in here working very close. Now that he's gone, he - no, I'm just kidding. I have the honor of working with Dr. Greenberg along with the others on this panel. And so I'll let them introduce themselves and then we want to keep this very informal. It's just an open question. But if people are going to be quiet, which I doubt with this group, we will just start the conversation. So, Crystal?

[00:00:54] **Crystal Wright:** I don't know if these mics are on.

[00:00:56] **Paula Hardeman:** They're on.

[00:00:58] **Crystal Wright:** My name is Crystal Wright. I'm a nurse practitioner in the neuroimmunology clinic.

[00:01:06] **Dr. Lindsay Horton:** Hi, I'm Lindsay Horton. I'm one of the neuroimmunology faculty.

[00:01:11] **Dr. Rajashree Srinivasan:** I'm Rajashree Srinivasan. I'm a paediatric physiatrist and I work with Dr. Greenberg in the demyelinating disorders clinic.

[00:01:19] **Paula Hardeman:** So we'll turn it over. Is there any general question or... Don't all speak at once. Symptomatic management. So, as we've probably heard from the earlier discussions, the different symptoms that can be associated with any of these conditions is a wide gamut. We got a question.

[00:01:52] **Audience Member 1:** So I'll start it off. And we have a child with TM and she had it at a very, very young age. So under the age of one. I hear an awful lot and I read an awful lot about neuropathic pain and pain problems, but she has not exhibited that or at least, has not told us of that. Is that something that we can expect as she ages? Is this something that -- because she didn't have it initially that she maybe won't have it as she ages? Because we've seen a lot of things. She's grown into some disabilities. So I was just curious what your guys' experience has been.

[00:02:34] **Paula Hardeman:** Raja, I think you can start.

[00:02:37] **Dr. Rajashree Srinivasan:** I don't think I have seen anything to indicate that but I guess I wouldn't say that, it could never happen.

[00:02:45] **Dr. Lindsay Horton:** I would agree. I mean, I think it would be unlikely at this point if she hasn't experienced it. I mean, I primarily see adults, it seems that pain is more common in adult patients but I think it would be pretty unlikely.

[00:03:04] **Crystal Wright:** I would say most of the time the pain is present after the acute attack right away and sometimes the pain can change over time, but it usually doesn't appear years later in my experience.

[00:03:18] **Dr. Rajashree Srinivasan:** If I could just add a point to that. And also, I think that she probably is -- she doesn't know anything different. So it's hard for her to even determine what could be pain. That could also be one of the factors.

[00:03:33] **Paula Hardeman:** It's a good point. I think we have another question.

[00:03:37] **Audience Member 2:** What are your primary tools that you use in managing the pain associated with these disorders?

[00:03:44] **Paula Hardeman:** There are lots of tools, Dr. Horton.

[00:03:49] **Dr. Lindsay Horton:** Sure. So pain is probably one of the most common symptoms we see. So neuropathic pain in patients with transverse myelitis or neuromyelitis optica, these similar conditions. And it can be really challenging sometimes. And so I think we all have different approaches and it can be very individual and patient-based depending on the type of pain, how severe it is. The medications they've tried. But in general, we use a lot of different medications like gabapentin, pregabalin, Duloxetine, things like that. And usually, just maximize the doses and see what works for each individual patient.

[00:04:30] **Audience Member 2:** If those traditional drug approaches do not work, what other approaches have you tried?

[00:04:38] **Dr. Lindsay Horton:** So it's tough. Some patients find things like acupuncture beneficial. There are other approaches. I don't know. Crystal, do you have any other thoughts outside of the traditional approaches?

[00:04:52] **Crystal Wright:** So I also think that sometimes it's a different type of pain. So it's important to ask those questions to determine, is it a neuropathic pain or is it a muscle-type pain that they're having. And that's why the medicines that we would use for neuropathic pain the anti-seizure meds aren't working because maybe it's more of an ache, maybe there's poor body mechanics or things causing the muscles to hurt and they're interpreting that pain as their TM pain, and it's more of muscle-related. So sometimes we need to approach it from the muscle standpoint with muscle relaxers or Botox or the baclofen pumps, things like that. And sometimes that can help the pain. We also have patients who try more natural approaches. Some of the amino acids have a little data to help with pain. And then there's, of course, the popular topic of, THC or CBD for pain, that sometimes individuals will go that route as well.

[00:05:59] **Audience Member 2:** Are there any new investigations ongoing for trying to address the pain without impairing cognitive function which all the things you've mentioned do? They impair cognitive function

and can increase fatigue. So it's pretty bitter pill for a patient to swallow. Is there anything else in the horizon that gives any hope for managing the pain without compromising neurologic function?

[00:06:33] **Crystal Wright:** I think that's why we try sometimes the antidepressant medications to manage pain, things like Duloxetine or Venlafaxine because they don't tend to cause as many cognitive issues or the fatigue that we see with the anti-seizure medications or even the spasticity medications. And the amino acids, of course, don't cause fatigue. So there are limited options that don't have those side effects. The other thing we find is sometimes if we go very slowly with the titration, their bodies adjust to it and they don't have as much fatigue or those types of side effects if they slowly increase. But it is very limited and there is not any magic pill out there that gives you the benefit with maybe no side effects or no potential side effects, unfortunately.

[00:07:30] **Paula Hardeman:** I will add as just alternative to the medications that some of my patients have found useful with neuropathic pain or pain in general is massage therapy or really making sure cause sometimes to Crystal's point, which she was pointing out it's not necessarily that it's truly nerve pain, but it is just increased tone or tightness within the muscle. And so I always explain it to patients that you keep in mind that you've got nerves going to that muscle as well. So if you got a tight muscle pressing down onto a nerve, you could be getting this mixed picture. And so sometimes it helps to really focus on, can we get the muscles to relax and that can also ease pain. So massage therapy has been something a lot of my patients have found very useful. If you have a health savings spending account or something you can use your money from that to pay for a massage. If you get your healthcare provider to write a prescription or a letter of medical necessity. Chip the mic right there.

[00:08:33] **Audience Member 3:** I'm sorry. I was just going to mention that right now we're working with the Dr. Conda about pain pump. In fact, Gary is going to go and have the pain pump test done in another couple of weeks. So they are hoping that might help. He's got the same situation. Nothing has worked.

[00:08:51] **Paula Hardeman:** And what the pain pump allows is to give very smaller doses of some of the medications like the gabapentin different things that can cause a lot of that cognitive deficits that you were explaining there's a way to get that small amount right to the area where we need it. And then a patient can have less of those systemic side effects.

[00:09:15] **Audience Member 4:** I'm glad that you mentioned massage therapy. I was just going to ask, what your thoughts are or if you do recommend like, your chiropractic adjustments if that's recommended for us. Because, like, I don't know about everybody else but, like, I get like neck pains and massage does help. And I did get like, an adjustment, like, a few like back, but I wasn't really sure if it's something that I should get familiar with. So I'd like to know if that's recommended and if it's something that I should like, get familiar with.

[00:10:03] **Dr. Lindsay Horton:** In general, I do not advise chiropractic adjustments. Massage therapy is fine but the manipulations they do can injure blood vessels in your neck and that can increase risk of stroke. So generally we do not recommend that.

[00:10:20] **Crystal Wright:** I've also had TM patients who have had a flare-up of their symptoms from the adjustments. So I also do not recommend adjustments.

[00:10:31] **Dr. Rajashree Srinivasan:** Sorry. To tag on -

[00:10:32] **Paula Hardeman:** Go ahead.

[00:10:33] **Dr. Rajashree Srinivasan:** - to tag on to the earlier question about fatigue and things like that. My question is, do you guys ever use any neuro-stimulant or anything to in the adult population to help with the - that aspect of cognitive fog or things like that?

[00:10:49] **Dr. Lindsay Horton:** Yeah, so these are fatigue in general. I mean, we see this with all these autoimmune neurological diseases. And so, I mean, in general, we do often try things like amantadine, modafinil, other stimulants if the fatigue is very debilitating.

[00:11:08] **Audience Member 5:** Paula, one thing you told me a while back is a tinge unit, and because that interrupts that pain, and I have used that off and on through the years and that has been very beneficial, and then the rehab and getting a good rehab. If you have a good spine person, they'll help you with a massage and stretching. You can do that at home most of the time, not everybody can. That seems to be more help for me.

[00:11:35] **Paula Hardeman:** Yeah, that's a great suggestion, working on the rehab side of things. I'm very blessed in where I work that I have a lot of good rehab colleagues that I can ask questions and come up with some different regimens for my patients as getting them with a tinge unit or learning how to do the different type of stretches or sending them to the physical therapist. So they can really teach them how to do those appropriate type of stretches as well.

[00:12:00] **Crystal Wright:** And I also think aqua therapy, like water therapy can really be helpful for pain. I'm not sure if it's just the exercises itself or the water pressing on the extremities and helping circulation move around. I don't know, but many, many patients really benefit from swimming water, aerobics or anything in the water tends to. And then they can exercise without having pain associated with it too.

[00:12:29] **Audience Member 4:** Is it like water therapy?

[00:12:35] **Paula Hardeman:** Water therapy?

[00:12:38] **Audience Member 4:** Yeah. Like hot water, like getting into a hot tub and getting into like a -

[00:12:47] **Crystal Wright:** So with any of these neural conditions where you might have damaged the central nervous system, we don't actually recommend getting into hot water, because it can affect how your body is sending signals through those pathways. It can bring on symptoms. And so cool water is what's recommended. So no spas that are hot tubs, things like that. I think I looked up the other day, the temperature needs to be around 84 degrees. Nothing in the 90s for comfort.

[00:13:19] **Audience Member 4:** And also no - what is it called? Is it like ice cold tub as well? That's not recommended as well. I think I read something about that as well.

[00:13:34] **Crystal Wright:** I know that we ever recommend it for patients, but I do have some patients that like really, really cold water, they do ice baths, but I haven't seen any data on using it for -

[00:13:44] **Dr. Lindsay Horton:** I don't think it's really been studied, but if you could tolerate it.

[00:13:50] **Crystal Wright:** That would be similar to like cryotherapy where it's like the cold therapy. I do have some patients that say it does help them. There has not been any studies. They find something that helps them.

[00:14:02] **Audience Member 4:** I think I read something about switching between the two, doing a really hot tub and then switching into like a cold one and, like, switching between the two and apparently it helps.

[00:14:17] **Dr. Rajashree Srinivasan:** Can I clarify that? Are you talking about for that area of the body or the whole body being immersed in the hot water?

[00:14:24] **Audience Member 4:** Yes, it's the whole body being immersed into the water.

[00:14:28] **Dr. Lindsay Horton:** I don't know of any data about that.

[00:14:32] **Dr. Rajashree Srinivasan:** In rehab, we'll recommend contrast baths where if you have an injured arm or anything like that, that you dip it in hot water and then in the cold water. So you're alternating it basically trying to get the nerves going, but the whole body like Dr. Horton said there's no data out there about that.

[00:14:51] **Paula Hardeman:** I have a question right here.

[00:14:54] **Audience Member 6:** I have two questions. One, she has over 50-degree curve scoliosis. She does see a chiropractor but he does not use physical manipulations on her. I don't know what it is. It's a thing he holds in his hand and he puts it and it clicks but he never like pops her neck around or anything like that. What do you feel about that?

[00:15:20] **Crystal Wright:** That would be fine and the massage. A lot of chiropractors have massage therapists in the office and they use massage therapy as part of their plan and all of that is fine. It's the manipulation that I try to get patients to avoid.

[00:15:36] **Audience Member 6:** And then another thing for her because we're very new into all of this. So she doesn't understand her pain a lot of it. So she calls it skin sensitivity. So it might be on her right thumb one day, her left arm another day, it might hurt when she touches something cold. It might hurt when she doesn't touch it at all. It's very hard to determine. She might wake up one day and both her knees hurt so bad she can't walk. She gets a weird pain around her ear, jaw, neck area. It's hard to determine what is what and how do we know. So I contact the doctor about everything. He's probably sick of me by now. But, I mean, is there a way to determine what is what?

[00:16:23] **Crystal Wright:** So there was a talk earlier on, is it a relapse or is it a - so what I tell patients is a good rule of thumb is, is it something you've had before? Because if it's something you've had before, most likely, you're having trouble conducting signals through that pathway. And if that's the case, we don't necessarily need to hear about it, but let's try to manage the symptoms like that. You don't need to go to, ER, for that. But if it's a brand new symptom that you've never had before, and it's in an area where you haven't had those types of symptoms, it is a good idea to go ahead and notify your provider because it could be that it is a new inflammatory relapse. But if it is an older symptom or something that has been intermittent in the past, so if she's had that same sensation on her thumb, five or six times in the past, even if she hasn't had it for six months, there's more, you want to think. Did she get hurt? Does she have an infection? Does she have a UTI or something like that, that might be contributing to these old symptoms coming back. But if it is a brand new thing that she's never complained of before, that's where I would definitely call the provider.

[00:17:36] **Audience Member 6:** These definitely were. The doctor at home really know what to do about it. Actually, this was his assistant. We just gave her Tylenol and Motrin and a couple of hours later she was able to walk again, but she hasn't had any more pain. Sensitivity, that moves from right side to left side, thumb to cap whatever that is all considered the same because it's skin sensitivity even though it moves around?

[00:18:06] **Crystal Wright:** It depends. If her symptoms have always been right sided or left sided, they may be just still on that plane, but in different areas. And then you can also look at the length of time that a

symptom is present. If it's something that's inflammatory, it's not going away in two or three hours, it's going to stick around for a few days. So if you give a symptom for 24 hours and it's still present, that's more of a sign that it might - if it's new and around for more than 24 hours, more likely to be inflammatory than just trouble working around damage that was previously present.

[00:18:42] **Audience Member 6:** Thank you.

[00:18:48] **Paula Hardeman:** Denise, I think. Oh, you don't? You're just stretching.

[00:18:56] **Audience Member 7:** So it seems like the go to is gabapentin -

[00:19:00] **Paula Hardeman:** Not necessarily

[00:19:02] **Audience Member 7:** - for neuropathy. So I have a doctor that doesn't really know what I have and she's good. She spends a lot of time trying to figure it out. It seems to be like that's what everybody goes to now is gabapentin.

[00:19:06] **Paula Hardeman:** It's an oldie but goody.

[00:19:17] **Audience Member 7:** But I'm six years in. And I was on 2700 a day and then I started monitoring what I should do. Is there a length of time? Because I know cognitively it absolutely affected me and I went to my daughter and said she's, yeah, okay, let's just cut back. But they don't know, is there a length of time that's recommended to be on a certain amount and then try to reduce down? I mean, is there any - because it just seems like that's what everybody goes to. For my dog they give gabapentin, it's for everything because the opioid thing's done. So now it's gabapentin. Is there a certain amount of time that is recommended not to be on 2700, based on what your pain is? I don't know if that's question you can answer.

[00:20:03] **Dr. Lindsay Horton:** Yeah. I mean, I don't think there's a maximum amount of time. Like if it's working well for you, I think you can be on it for as long as it works well. But if you're -

[00:20:13] **Audience Member 8:** [inaudible]

[00:20:15] **Crystal Wright:** I would say at that point, it's not [crosstalk] if you're having side effects from it and it's affecting your day to day life, it's no longer the most appropriate drug treat. Does that make sense? Like at that time, I would discuss other options, there are other things to try. I wish the list of things to try was longer. But if you are not getting benefit or your benefit is at a cost to you, then maybe that's not the most appropriate drug for you. And I think you should try to have that conversation to look at other options, if that makes sense. It's not just gabapentin, there's pregabalin, there's other anti-seizure medications that can be used off label for pain.

[00:21:03] **Audience Member 8:** Seizure med?

[00:21:08] **Crystal Wright:** Yes. So gabapentin is a seizure medication. but there's multiple other anti-seizure medications that can be used in place of gabapentin that you can try. It doesn't have a 100% success rate with everyone, but everyone's a little bit different. So we do trial and error to find the right one. And then there's also the antidepressant medications that may be an option there. And there are other things to try besides gabapentin, gabapentin is used first because it's cheap and it is well known, but there are other things that gabapentin is causing side effects. So I wouldn't put up with side effects just because I would encourage you to try other things if you haven't exhausted those avenues.

[00:21:51] **Audience Member 8:** That they use for pain?

[00:21:53] **Dr. Lindsay Horton:** I personally haven't and I don't know that anyone else in our group has but oftentimes we can offer a referral to pain management specialists and then, I don't know if they would consider that in general. I haven't seen that that's the most effective for neuropathic type pain or specialty type pain. But in theory, if several options have been exhausted, that's a conversation, you could have with a pain specialist.

[00:22:29] **Paula Hardeman:** Any other questions?

[00:22:35] **Audience Member 9:** What about gummies and mushrooms?

[00:22:37] **Paula Hardeman:** Oh, of course, somebody would ask a controversial question. So, we're in the state of Texas and neither one of those things are… no, I'm just kidding.

[00:22:46] **Audience Member 9:** I've had a problem for two decades and I've tried every drug I've heard mentioned here. I was taking five of them in 2016, Lyrica, Cymbalta. I don't remember. I had a hallucination. And the only thing that I found that helps me at all to sleep and it doesn't help much anymore are THC edibles. And I did move specifically from the state of Indiana to the state of New Mexico, not only for the weather, but because I knew that it would be available to me and I've not found it to be particularly helpful, but I have read a lot of things about particularly the mushrooms helping with depression. And I'm just curious, it's probably too new and not a lot of people know.

[00:23:41] **Paula Hardeman:** So to your point, the mushrooms is fairly new and they're doing something what are called micro dosing. So they're trying to come up with these very small amount to help with. And I feel like it's more of a very refractory depression that's failed other things and really bad anxiety. The THC it's been looked at more for spasticity type pain, especially in MS patients. And if I remember correctly, it's like a 50, 50 from the data standpoint. Some people, it works really well in, some people, they don't get any benefit. The one thing I do caution my patients if they're in an area where they're going to consider trying a THC is there is some cognitive side effects that can come with it as well. So it's what Crystal was explaining is that risk benefit ratio, if you're okay with just a little bit of brain fog, but it really improves a lot of the pain, then that's only a decision you can make off of what's comfortable for you. Do you have anything to add?

[00:24:51] **Dr. Lindsay Horton:** Yeah, I would just agree with that. Like you like Paula said, the mushroom, that stuff is new. So we don't have much to say in that regard. But for the THC, it's, it's been mostly studied for pain related to spasticity and spasm. So not really like the neuropathic type, burning, tingling pain. And a lot of it is about 50, 50 some patients find it very beneficial. Others don't or can't tolerate the cognitive side effects or other type side effects.

[00:25:23] **Audience Member 10:** So I've been told a lot that THC or can like edibles are really helpful and I've tried it a couple of times and it has made me sleep better because I haven't been sleeping very well just because of everything going on. if you do it in moderation, will it affect you cognitively or is it like if you abuse it like long term? Because my neurologist in Oklahoma told me that it would be fine for - because I'm wanting to go into neurology, so I have to be sharp. But he said it would be fine as long as I'm not abusing it. But I just wanted like more opinions.

[00:26:02] **Crystal Wright:** I do think the cognitive effects are dose-dependent. And in the MS trials, it affected their cognitive functioning for up to 30 days after dosing. I do think it is something that is likely to occur around the time that you take the dose not months later. I do think it's dose-based and an acute side effect.

[00:26:29] **Audience Member 10:** So the cognitive effects aren't like a long term thing that I would be dealing with when I'm like, 30 going in to like [crosstalk]

[00:26:40] **Crystal Wright:** When I send someone for neural cognitive testing, I asked if they're taking THC and if they are, I ask that they stop it for about 30 days before the testing so that we can have more reliable results.

[00:26:50] **Audience Member 10:** Thank you.

[00:26:59] **Paula Hardeman:** Any other questions? I know we're getting close to the break time and everything. We have one back here.

[00:27:14] **Audience Member 2:** Have you found that the more pain that a patient is experiencing, the greater their fatigue? Because, I mean, to me just observing it, it's almost like the pain exhausts the patient. And that's why if you can't control the pain you're never going to be able to control the fatigue.

[00:27:34] **Dr. Lindsay Horton:** Yeah. I mean, because pain can be so, difficult to manage and can be such a day-to-day problem. It can significantly affect patients quality of life, whether that's fatigue, depression or other mood-related symptoms. And so definitely if it's not well controlled, it can definitely cause other symptoms like you're mentioning.

[00:28:02] **Paula Hardeman:** No, hurry, Denise.

[00:28:06] **Audience Member 11:** Dr. Horton, I'll be seeing you Monday.

[00:28:11] **Dr. Lindsay Horton:** Hi.

[00:28:44] **Audience Member 12:** Is the chronic fatigue and the horrible brain fog, is that a possibility of getting on disability with?

[00:28:33] **Dr. Lindsay Horton:** That would be a question for you, Crystal.

[00:28:37] **Crystal Wright:** So it's hard to get on disability which [crosstalk]

[00:28:43] **Paula Hardeman:** I think you should explain why that's a good question for you, Crystal.

[00:28:48] **Crystal Wright:** So I do the disability clinic within our neuroimmunology clinic. So I see patients who are planning on filing for disability or they're having difficulty in the workforce where I can help them with accommodations or things like that. So in my experience, if I have someone who comes in and it's a mobility issue, it's a little more straightforward when they file for disability, they're more likely to get approved the first time. But when it's a subjective symptom like fatigue and cognition, it's a little bit harder. And so for those patients, I would highly recommend doing neurocognitive testing so that we can measure it and put a number on the cognitive issues. And then I do give fatigue scores and things like that and I try to make sure those things get put in the record to help them when they apply.

[00:29:42] But when you apply for disability, now it's no longer like your provider saying, oh, this person is disabled, they should get disability. It goes in front of a group of physicians that review your chart and look at it. And so they do put higher weight on objective data versus subjective. And unfortunately, those are subjective symptoms or can they be disabling? Absolutely. Can they affect your performance at work? Or make it where you come home from work? And all you want to do is be on the couch and go to sleep? Yes.

So it is possible to get disability for that. But it is a little harder and it may take some time for approval. And your cognitive functioning would need to be at a level that is quite significant

[00:30:36] **Audience Member 12:** If I were an employer, I wouldn't hire me.

[00:30:39] **Dr. Lindsay Horton:** We can talk about it on Monday. If we haven't referred you for cognitive testing, we could.

[00:30:44] **Crystal Wright:** She could refer you to come and meet with me.

[00:30:46] **Dr. Lindsay Horton:** That's true too.

[00:30:52] **Paula Hardeman:** Any other questions? We'll go ahead and get prepared to wrap up. What I would like to ask for each of the panel members from a symptomatic standpoint, is there a certain education point or a thing that you share with patients as they try to manage this very diverse disease that can have a whole bunch of different symptoms associated with it? Crystal, just because you're on the end and we're going to go.

[00:31:27] **Crystal Wright:** Paula likes to pick on me.

[00:31:30] **Paula Hardeman:** And that's true too.

[00:31:32] **Crystal Wright:** I would say the biggest thing is stress management and making sure that you're balancing your symptoms, your home life, all of those things together. And if you're constantly in a stress cycle, things are going to be worse. If you're managing stress, taking that time for yourself, making sure you're taking care of yourself, exercising, eating well, hydrating, then symptoms are going to be better. And so I think just managing stress and managing your body as a whole is probably more important than any of the medications we can give you other than the prevention medications, of course.

[00:32:16] **Dr. Lindsay Horton:** And I think just to add on to what Crystal said, not only just stress management and taking care of yourself, but a lot of these symptoms are invisible and they're not apparent to your loved ones, your friends, your family, your caregivers, things like that. And so having events like these, where you can bring your family and educate others on what you're experiencing, I think can be very valuable just because looking at you, you may not appear disabled and people don't know what you're going through. And I think it just helps to have others recognize how significant these symptoms are in your day-to-day life.

[00:32:14] **Dr. Rajashree Srinivasan:** And I work mainly with kids. So from my perspective, when I see my patients in the clinic, I'm usually reviewing what education they have regarding their spinal cord status about gallbladder management, specificity management, and things like that. And of course, in kids, we cannot do anything without school being a part of the whole discussion. So that is also something that we talk about making sure that the kids are attending the school, functioning at school adequately as well. So just overall globally looking at the whole picture.

[00:33:30] **Paula Hardeman:** Yeah, and I agree with everything that's been said. I'm a real big pusher in my visits of talking about stress management and just taking care of the whole self and not just focusing on this neurologic condition. But I also want to make sure my patients have - if they have blood pressure issues that they have good blood pressure management because that can also have an effect on your nerves. So everybody is usually aware that diabetes can, but there's other conditions too. So I am a big pusher on making sure you're going in for your preventative screenings. You're having your yearly physicals. You're doing those other things just to take care of the whole self.

[00:34:06] So it's very easy to think, oh, my neurologist is the only person I need to see because of this complex neurologic condition. But to please keep in mind, there is a role for your internist, your primary care cause there's just other things from a whole management that needs to be taken care and addressed as well. So I think we are to a break time. So let's break for about the next 15-- Dr. Jacobs is next and he's going to talk about bladder management, which is always an exciting discussion. So we'll be starting back at 3:15. Thank you, everyone.