Introduction to neuropathy and fall risk

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Welcome to Healthy Choices with your host, Ray Solano from Austin, Texas. Now, here's your host, Ray Solano. Hi, I'm Ray Solano with PD Labs. And thanks for joining me today on another edition of Healthy Choices, Dr.

Talks. We're going to explore one of the most under-recognized drivers of falls, injuries, and just loss of independence. It's called neuropathy. And while most people think of it as a fall risk, they imagine muscle weakness or poor vision.

But the real issue often begins long before that. with damaged or malfunctioning nerves. So this is something that's really important. And today our guest is going to go through many of these functions.

What is causing damage to malfunctioning peripheral nerves? We'll look at how neuropathy changes the body's communication system and why these changes go unnoticed in many integrated clinicians.

What they can do to restore both nerve health and stability. Our guest today is Dr. Alan Shi, a board certified podiatrist at Head to Toe Healthcare in Tucson, Arizona.

He's part of a small group of surgeons worldwide trained in ELISOF technique in Russia. that worked on the advanced peripheral nerve surgery at John Hopkins Institute.

And his expertise bridges surgery, biomechanics and regenerative medicine and a unique perspective of how neuropathy develops and how it leads to instability.

Meet Dr. Alan Shi and the causes of neuropathy

Because this is most important is how it can be reversed. We hear lots of commercials about neuropathy on so many news channels and social media, but You know, we don't really look at the prevention for this or how these things start.

When it does occur, it's sometimes just too late. And neuropathy dramatically increases the risk of people falling. You know, that's something I didn't really know, and I'm just really great.

We have a great physician that's gonna really go through that. When the nerves that sense touch, vibration, and position begin to fail, the brain simply stops receiving accurate feedback from where the feet are, and every step becomes a small gamble.

And that's why you see people that are walking down a street somewhere or a sidewalk and they're just walking real slowly and they're taking little baby steps.

So the delay of a few milliseconds can mean a difference from catching yourself or hitting the floor. So sometimes we hear things like the ground feels different, my shoes feel tight.

These are the early clues that clinicians overlook and sometimes people just give up walking. So anyway, the rigidity throws off the center of gravity for these patients and makes them fall more likely.

So many times we see neuropathy driven by nutrient deficiencies. So that's why our early assessments are so critical. Dr. Shi, your team focuses on the three pillars, restoring nerve function and improving circulation and restoring balance.

Give us a little bit of feedback from what I've just mentioned on some of the things we could do about what's your treatment about neuropathy. And I think it's reversible, but give us a little bit of your opinion in this topic.

Sure. And so, I mean, first off, neuropathy isn't something that's, it's actually, it's not really taught per se in a residency and even fellowships and often in most cases, especially like orthopedics and podiatry and foot and ankle stuff.

My exposure really came from one of my mentors out of Scottsdale, Dr. Jacoby, he introduced me to Dr. Dellen's work. And so Dr. Dellen is from John Hopkins, who's one of the world's authority in peripheral nerve surgery.

And his concept basically is there are areas where the nerve gets pinched and then it causes the numbness, the tingling, the weakness, right? And so everyone understands carpal tunnel surgery, right?

So he was a hand surgeon and he was decompressing nerves on diabetics and they were getting better. And they're like, hey, doc, can you do the same thing for my feet?

I'm a hand surgeon, right? But then he's also an educator to the best and brightest and he was like, oh, maybe there is something to it. And so he basically found corresponding nerves in the legs and feet.

So for instance, like the median nerve in the wrist is the one that gets pinched, right? And there's some other ones as well too that kind of parallel the legs and feet.

So the tibial nerve and then there's some other accessory nerves as well that give you the the glove distribution or the stocking distribution, right?

So that's kind of where it all started, just the idea that nerves could be treated, right? And so he kind of just gave like, just gave me insight into that world and it sort of challenged us.

And so he was actually, he's a super bright guy and so you don't want to argue with him. But, you know, so are you familiar with RSD? Yes. Okay. So RC, Reflex Sympathetic Dystrophy, it's also known as Chronic Pain Syndrome.

So his mnemonic for that condition is really stupid diagnosis. And his theory is that, look, they're having pain because there's a nerve that's entrapped or compromised.

You just need to find the nerve. You need to understand the nerve at a higher level and then you can take care of the pain.

Nerve compression, decompression, and reversibility

And it's as simple as that. When you kind of, I felt like you sort of threw it out and got one, like you can get it. You just have to figure it out and you have to start learning.

And I mean, he's pretty unbelievable. Interrupt what you're saying. So once you identify the pain and where that nerve is, is it damaged at that point?

Or you have to figure out a override? for that? Exactly. Yeah. And so I think the first is to find it, right? But once you find it, then whether it's surgical, whether it's an injection, whether, you know, like, and so, and this is just kind of one aspect of neuropathy, right?

Because there's a lot of different areas of neuropathy. It impacts so much, but it's just one area to kind of start breaking down this whole topic of neuropathy, right?

And so, like, so we know if we can We know to do surgery, we have to numb up certain nerves so we can actually cut, right? Or do what we need to do. And so if that's the case and we can numb up nerves so we can actually do surgery, well, then if someone's just having pain in random, well, there's probably a nerve that we have to like take care of to kind of at least get some of that pain and discomfort to improve.

Right. So is it reversible? I think this is the thing that, yeah, we have… we can reduce the pain but is there a way that you've done to really rebuild that sometimes there's a peripheral nerve decompression surgery or really those pressure is there a way that you you see that you can get regeneration of the nerves or be able to go around wherever those blockages are.

Have you seen that remodeling? Absolutely. It's on a more extreme case. I had a college baseball athlete that had a drop foot. He just couldn't pick up his foot at all.

Right. That's where the common peroneal nerve next to the knee was compromised, right? And so we ended up doing surgery and released that nerve and then you got full recovery back basically, right?

And so that's kind of on the extreme case. Most people don't have an extreme foot drop where they can't pick up their foot, but many people are a little slow in picking up their foot or just a little bit more labored than they need to be.

And so they might not need surgery, but they might just need a little bit of optimization of that nerve or helping with some of the stiffness in the muscles.

Also, a big one is sensitivity in the ankle joint. So a lot of times just naturally when we have pain, we guard. So when we guard, and if there's sensitivity in the ankle, for instance, you might pick up your foot a little slower or your balance doesn't adjust as quickly.

And so that's when you feel old and stiff. And so a lot of times just resetting that sensitivity can make quite a big difference for people. Okay, that's important.

You know, one of the things that, you know, we see for patients early on is we track, we think there's a direct correlation between advanced insulin resistance and causing people that have had tremendous levels of hemoglobin A1C for blood sugars over time.

Is this something that you, do you agree with that, that you see a correlation between these two because diabetics You know, prediabetics is a tremendous degradation of the tissues of the extremities.

Your opinion of that? Yeah, I mean, there's no question that diabetes has a strong influence on neuropathy. And that's usually where most of the medical community starts, right?

And so like, usually if someone has neuropathy, then the assumption is they have diabetes. Right. And oftentimes that's the case. And certainly if there are high blood sugars, that's step one, for sure.

Like getting blood sugars under control, I mean, it affects so many things from healing to like how the nerves function and everything. Certainly. But there's a large segment as well too, and many times they're identified as idiopathic neuropathy, right?

That have nervous sensations, numbness, tingling, burning, and they don't have diabetes. They've been tested for diabetes, right? So yeah, absolutely diabetes is a factor, but it's not the dismissal either, right?

So a lot of times, Like, if they do have diabetes, it doesn't mean they can't also have nerves that are pinched or they can't have other areas where there's opportunity.

I mean, certainly, first things first, take care of the blood sugar.

Diabetes, circulation, and neuropathy factors

Absolutely. But there might be some other areas as well, too. You said sometimes it has nothing to do with insulin resistance. Maybe you can expand on that for us.

Yeah. And so a lot of the times that we start just breaking into smaller pieces, right? And so a lot of times we start with just where nerves are compromised, right?

Because that's a common spot. And certainly those are areas where they have influences, whether it's weakness or the numbness or burning or tingling. Like we kind of mentioned circulation earlier and there's a strong correlation because like So, for instance, a lot of times when there's a big nerve, there's a big artery or vein right next door.

And it's not uncommon. These are kind of tight, tight tunnels that these blood vessels and nerves run through. And sometimes, actually, it's the blood vessels that truly impact the nerve.

Because imagine, it's kind of like the middle seat on a plane, right? If the person's really big, well, it kind of pushes on the other structures in the area, right?

If the vein, let's say, is very swollen in that canal, that tight canal, then the nerve gets squished, right? So releasing this area not only helps the nerve, but it also helps circulation as well too.

You know, that's something that's so informative. One of the things that we use when we see the rigidity of the collagens and rigidity of the arteries and veins, we see that many times it's calcification of deposition, just like we have hardening of all these arteries.

We also see many times using protolytic enzymes. to help break these calcium deposits. Have you used any protolytic enzymes or maybe the lumbar kinase or natokinase?

Any of that have you found helpful for these patients? I don't really have that much expertise and I don't really have much experience with that. I think that's certainly an emerging area that I'd love to learn more about because I think there's most likely an opportunity.

I mean, I know your company started with rapamil to help with fibromas and I think that's a great treatment, okay? Because like your other treatments are pretty poor and so I think I'm sure there's opportunities here as well too to help with some of the stuff you're talking about.

Yeah, I think there is a lot and it's very important to explore all the different opportunities. I think the most important thing is we want people to realize that the neuropathy isn't just a disease of the aging, it's just a disease of neglect and we assume it's untreatable.

But I think it's important to look at the physical aspects, get with a specialty trained podiatrist like yourself. that they can look at all the different factors so that we can piece together how we can let the body fix itself as best that we can for circulation.

How about physical therapy as we're able to build up those muscles around that area? Because atrophy and the less confidence people have, how do you feel about physical therapy for addressing for neuropathy?

I think physical therapy is great and I think it can have a big improvement. I think there's a lot of times there's a good synergy working together because, for instance, if someone has a lot of sensitivity in a joint, it's very hard for the physical therapist to kind of get mobility of that joint and get it moving because just the natural instinct, everything clamps down.

But if you were to do an injection to kind of calm down that joint, decrease some of the sensitivity, all of a sudden, the therapist can get some motion.

And it's really, traction builds traction, right? And so like, if you can at least get some motion, then it makes it easier. And then, so I think there's a great, great synergy with combined treatments.

I think you're absolutely right. Moving is important to have that body. Even though there's some pain, there's some things you could possibly do to be transdermal topical pain medications to bring that special pain relieving.

There's many different types of pharmaceuticals that we can use that can block that pain modulation.

Treatment options: physical therapy and pain relief

Kediaprofen, we've sometimes have used some ketamine topically we've used and also gabapentin, things that just stop the pain signaling so that people can move, which is important.

We use sometimes diclofenac, is also a nice spray topically or lotion that can give mobility quickly because we want people to move. We want people to, we don't want them to be within pain.

There's also a unique peptide that we work with It's called BPC157. That is a signaling peptide that tells the body's macrophages to go and heal, that there's an inflammation, there's an area of concern in the body that needs to be addressed.

And we've used this injectable and topically or nasal spray and even orally, reduce that inflammation. So that's an area to look at as the BPC 157. And then there's another one that we worked with a special form of the active ingredient.

Take these active ingredients that are very potent, that are insoluble, and put them into chewable forms that people can absorb very quickly. You've heard of curcuminoids, curcumin.

Well, we've identified the active ingredient in curcumin and isolated it. So you don't have to take buckets of it. And it reduces the inflammation and pain immediately.

So Tetra-Cure and BPC are great combinations. I'll send you some links for that. In your practice for what you're doing, it may have a place. Because we look at many different buckets that people can do to give them hope.

and give them that there's choices as opposed to just giving up. Because sometimes people just give up walking, right? It's just too painful. And that's the worst thing you can do.

Now, the patients that you see that come up with neuropathy, they're all different age groups, aren't they? They are. And so certainly there are some that are diabetics, but I wouldn't say that the bulk of my patients are diabetics, but many of them have neuropathy.

And so, and it's kind of a nebulous thing. Some people say, hey, yeah, I just, I feel like I'm walking on cotton balls. Or some people like, a lot of times it's not like, oh, I'm in horrible pain, but yeah, you're right.

I do shuffle my feet a little bit, right? Yeah, like I do, I am a little clumsy. I do stumble sometimes, right? And so all these things, one of my biggest things is to reduce fall risk.

And so if we can get you to pick up your foot better, that goes a long ways towards reducing fall risk. Exactly. And what we work closely with it is sometimes You know that we see nutrient deficiencies, chronic inflammation, mold exposure, we see inflames in the nerves.

So working as a team, well, is something to work on and to screen them and then send them to you to take a look at it. Give us your website and so people that know how to get a hold of you and understand a little bit more about your practice, doctor.

Sure, yeah. And so the practice name is head-to-tail healthcare. And so I practice with my wife, she's an

optometrist, that's the head-to-tail. But more specifically for the foot part, the easier website is tucsonfoot.com.

And you're accepting new patients, I understand? We are. And, you know, sometimes people can travel. You do any, in telemedicine, they can call you and get some possible, who knows, maybe some appointments and take a trip to you, right?

Yeah, usually, like a lot of times it's a physical exam that's pretty important. Right. Because we're trying to understand and like, we kind of correlate that what we see with what they tell us and but the physical part is pretty important.

Exactly. So you said your wife is an optometrist as well? She is. Well, you can see there's some things that are going.

Hope, regeneration, and closing remarks

Sometimes you can see degradation of retinal nerves and the retina is a great indication of circulation dysfunction. So I bet you she sees things early on of inflammatory conditions that could be a great signal to aging too quickly, I would say, right?

Absolutely. So it's going to be head to toe to eye, right? Yeah, she's the head part. The toe part. We can go eye to head to toe or something like that.

Maybe that would work. I kid with her. If she was a dentist, then we'd have to be like hoof and mouth. Hoof and mouth. I like that. Well, this is great.

Well, I think this gives people, as we wrap up here, is just don't accept it, neuropathy. Get some help. Don't just give up. There's topical therapies.

There could be many different tools in everybody's toolbox, but I think it starts with nutrition, it is with physical therapy. There are many different topical electronic currents that can just improve regeneration of nerves.

We feel that there's possibilities, especially with the area of peptides. You're going to see more and more regeneration of peptides, TB 500, AOD208, AOD208, I believe, is a unique peptide.

So we're going to see more and more of these different availability of peptides that regenerate neurons. So check us out. And for anybody who wants to get more information about any of the things that we've talked about, check out our website, pdlabsrx.com.

That's pdlabsrx.com. And also visit head2toehealthcare.org. And we want people to join us on our podcast. Subscribe to Healthy Choices wherever you get your podcasts.

We subscribe here to Dr. Talks. We have Dr. Alan Shee and many other esteemed, educated practitioners that have specialties in this area, especially in neuropathy.

It's just sometimes there's a lot of noise out there. Things just don't work. So, well, anyway, we wanted to thank everybody for subscribing to today's broadcast, and we're going to do this one more time.

And if you have any other closing comments, Dr. Allen, for our Healthy Choices audience? No, I just think the biggest thing is we want hope and optimism with neuropathy, because there's definitely things that can be done, especially purple nerves.

So the nerves in the legs and feet can absolutely regenerate. Central nerves, not so much like the brain and spine, not so much there like Christopher Reeves, but certainly peripheral nerves, there's a lot of opportunity.

Well, great, I'm Ray Salano. Thanks for listening. Remember, every informed, integrative choice you make today

brings you one step closer to your healthcare tomorrow.

Thanks a lot, Dr. Allen, and we look forward to having you back again, okay? All right, thank you. All right, take care. All right, bye. Thank you for listening to Healthy Choices podcast on Dr.

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