Breakthroughs On Treatments For Progressive MS Transcript

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Introduction and Guest Background

This is Doctor Talks, real talk from real doctors on the issues that matter to you most. Hi, everyone. Again, thank you for coming, being part of the Multiple Sclerosis and Neuromune Summit.

I am here with my very good friend, Dr. Ken Sharlin. Now, Dr. Sharlin and I have known each other for many years, really a decade now. And Ken is a board certified neurologist who's also trained in functional medicine, integrative medicine.

He practices functional medicine, does research, is a cutting edge neurologist. And he is where I send my complex neurological patients. And they really get superb care with Ken and his team.

So Ken, I am so pleased that you're here. Is there anything that I left out in your intro that you'd like to stress? No, thank you so much. Appreciate it.

Okay. So let's get right to this. You know, I know that people are very, very excited about some of the new DMTs that are coming out there. And one of them is the BTK inhibitors.

I wonder if you could comment briefly about that drug type and whether or not it's worth all of the excitement that is happening in the conventional world.

Yes, absolutely. And I want to sort of broaden that if I can and put it in context because I think, you know, it will really help a lot with the discussion and where things may go over the next 40 or so minutes.

You know, I don't know if in this summit, your 3.0 summit, you're interviewing the folks from the Octave Bioscience group, but I know that was in the 2.0 and that particular test is very important.

I think even in looking at these BTK inhibitors, You know, we're looking at, we're talking, first of all, broadly about what's called disease modifying therapy.

BTK Inhibitors and MS Treatment Context

And, you know, in the, in the management of the disease MS, we broadly divide the approach, the clinical approach into symptoms management, maybe that's pain or spasticity or, you know, bladder function issues and things like that.

And then drugs or treatments, and many of the new treatments are biologic agents. They're not just the standard sort of chemical drugs, but they are really aimed at attempting to, in particular, slow what we call sustained disability progression.

As you know, when you're a researcher, you do clinical trials, you have to define a primary outcome for a clinical trial. Historically, if we go back to the very first drug that was introduced in the United States in about 1993, that was beta-seron.

And at the time, the study really just looked at relapse rates as the main outcome. But as time went on, it was realized that while we should be looking at relapse rates for people at least who are relapsing remitting MS, that there are other measures of primary outcome that may be more important that we really have to put first in terms of determining if a treatment is effective.

And so there's been a shift toward what's called sustained disability progression. And that's based on a gold standard in, in, in sort of a measuring stick of how a person is doing with MS called the ADSS or extended Kursky

disability status scale.

And it's largely a glorified physical examination in which different aspects of the exam are given points. It's heavily weighted toward gait or gait dependence, meaning that are you walking independently?

Can you walk 500 meters unassisted or Do you use a cane? Do you use a walker? Are you in a wheelchair? If you're in a wheelchair, can you still transfer?

Things like that. So those sorts of questions weigh heavily in the EDSS score. All right. So if we look at broadly all the different agents, and there's some like 25 or 26 agents currently.

They're in several different broad categories, which we can certainly talk about. But if we use this test, the MS disease activity test from OctobioScience, which really puts a microscope on MS at the cellular level, which is very different from just eyeballing an MRI and saying, how's that person doing?

There's a lot that can be missed there. What we see is that the people who are on what I call B-cell depletion therapy, so that's sometimes it's rituximab, but that's not technically approved for multiple sclerosis in the United States, but it's ocralizumab or ocrevis, ophotumumab, which is chysimpta, and then the newest sort of reiteration of ophotumumab, or rather ocralizumab called briumvi.

So when we look at the MS disease activity score, I find, and I have a lot of patients with MS in my practice, and they all get this blood test when they come in.

And by the way, you can't just go to your local Quest station or LabCorp or talk to your primary care doctor and get this test. This is an exclusive relationship between the clinician like myself and Octave Bioscience to be able to perform this test.

So what we find is that the folks who are on those B cell depletion therapies have by far the lowest scores. These drugs are incredibly- And we should clarify that low scores are what you want.

Yes. You don't want a high score. So the octave you want to have a low score. So continue Ken. Yeah, so it is measured from one to 10. So essentially, I don't think there's a zero, but one to four is low, 4.5 to seven is moderate, and then 7.5 to 10 is high.

And what's wonderful about this test is not only does it give you kind of a snapshot of your current level of disease activity from an immune perspective, how active is that immune system in attacking myelin nerve cells in the brain from a sort of a myelin breakdown perspective, and then also from a what they call neuraxonal integrity, which is the degenerative component of MS independent from the destruction of myelin.

And so the people on these drugs have very, very, very low scores. And I think the folks who own the patent on Kisemtar Ophetumab, which is Novartis Corporation, they can project out, expect relapse rates over a long period of time, and that this drug can suppress relapse rates as long as 20 years.

So these are very powerful treatments, but they do have some downsides in that we're talking about attacking or really destroying what are called B cells.

These are the immune cells that make antibodies, but these are the cells that come from your bone marrow. They circulate around in your bloodstream. They're there among other things to protect you against viruses and bacteria.

They produce antibodies, but they normally do engage what are called microglia in the brain, and that's thought to play a major role in MS. And by the way, these cells get infected with the Epstein-Barr virus, which is probably a major trigger.

We know people who have EBV are about 30 times more likely to develop MS. So bottom line is these are very effective drugs, but they do have some downside insofar as in functional medicine, we talk about root causes or

upstream versus downstream.

And when you inhibit those B cells, and not all B cells, just these autoreactive ones, what are called CD20 positive B cells, Not surprisingly, there can be some consequences and that is more often you have infections, upper respiratory infections, bladder infections, things like that.

Since MS is a central nervous system disorder, meaning the brain and the spinal cord, not your peripheral, the nervous system, the nerves like your median nerves, the carpal tunnel nerve, it doesn't have anything to do with that.

Progressive MS and Emerging BTK Trial Results

Question would be, well, what if we can go even more downstream if we can really engage these B cells when they are in the central nervous system and stop them from interacting with the central nervous system's own immune cells, the microglia, rather than mess with them when they're out there circulating in the periphery?

So we have this enzyme, we all do, it's in our immune cells called a Bruton tyrosine kinase inhibitor. And if this particular enzyme is blocked, essentially it appears in animal models at least, that we can inhibit the activity in the central nervous system, but still protect the immune activity in the…

outside of the central nervous system. That's a great theory, right? So there are about five different compounds that have been or are being in different stages of testing and clinical trials.

And we've recently gotten some results which are very interesting and in some ways very exciting, but with some surprises as well. So we've seen, and these are like early press releases.

As you know, Dr. Walz, by the time this interview is aired, it will be past us. But when we're now interviewing, there's a major European meeting on MS that happens every year called Ektrums.

And Ektrums is coming up in about a week. And these big, big meetings are platforms for the researchers to sort of roll out to show their results, unveil their results.

So we have two main, of the four or five, we have two main BTK inhibitors. One is from Roche Pharmaceuticals, Roche Genentech, and the other one is from Sanofi, Sanofi Genzyme.

And actually we've been involved with researching both of those. There was another one from Serrano, which I'll touch on in a minute. I believe Novartis has one, and I think there's one other one.

I don't know the status of the Novartis one. So what did we learn? Well, we learned that it appears that in both the Roche compound, which is called phenabrutinib, and the serrano, not serrano, sanofi compound, which is called tolabrutinib, that the BTK inhibitors appear to have a very significant effect on people with progressive multiple sclerosis.

There's a caveat here. There are very few proven or approved drugs that are effective in this what we would call stage of MS. And typically, classically, we talk about MS as having a relapsing remitting stage, as you know, where there are attacks and then the person maybe recovers, they may not recover entirely.

So it's kind of like climbing steps where you're going up and you're level and then up and you're level and then up and then you're level. But in this case, these changes leave people with more and more disability potentially over time.

And there are many drugs approved for relapsing remitting MS. There are no clinical trials today that study new compounds for relapsing remitting MS that are placebo controlled.

All of them have what are called active controls. And I call this sort of the. like the, who are we going to beat up on?

And the popular drug to test these new compounds against is called Obagio or teraflumide, which is a fairly low efficacy drug.

And what has happened, especially what we saw with the Serrano one, and then with the Sanofi tolabrutinib is that it, this study, this large study failed to show that there was a difference in efficacy between Obagi-O and these BTK inhibitors, even though they're sort of close cousin predecessor that B cell depleters like ochralizumab were highly effective, highly effective.

However, what both Roche and Sanofi have found in different stages of clinical trial, Roche's in phase two, is that these drugs are effective in shutting down new acquired lesions in people who have progressive MS.

So it's really important to understand that I can tell you Serrano made a decision not to just shut down the drug. Maybe it was effective compared to if you look at the Obagio group that was equally effective, so he couldn't show a difference.

But if you're going to develop a new drug, that's a huge financial investment. And there's no point in rolling out a treatment that's not any more effective than something that's already out there, probably a lot less expensive.

So they just shut down their whole program. The same thing happened with the Sanofi, tolobrutinib, no more effective than tereflunamide. But we have now, you know, tolobrutinib and fenobrutinib that appear to really stand out as promising treatments for progressive MS, which, like I said, even if you look at ocrelizumab that has an approval for progressive MS, primary progressive, the benefit is very, very marginal.

Yeah, I want to stop for a minute because I really want to highlight this because I have secondary progressive MS and most people with relapsing remitting MS, assuming that you continue to live, you will eventually convert to this progressive phase of the illness where we're not having relapses.

But the concern is this relentless progression of worsening disability. Yes. And so This is a big deal that there are a couple of drugs and they aren't yet approved yet.

No, you can't get, we don't want people to think that I've had these kinds of questions. They, people, you know, everybody's on Google, which, which, okay, that's great.

Our patients are sort of more informed, although there's something to be said for the experience and the knowledge that we have to be able to interpret the data correctly.

But you can't get these drugs or anything, but they will be available, I would say. You know, just looking at timelines of other drugs, we were involved in bringing QICMTA to market.

We've been involved in bringing the new Alzheimer's drug to market called Dananumab from Eli Lilly. So from the time that the studies are finalized and paperwork goes into the regulatory agencies, the FDA, and then eventually what's called CMS, Centers for Medicare and Medicaid Services, You're generally probably looking at about, I would say about six months or so is what I've seen.

So they undoubtedly will probably be. So they'll eventually be approved. And for people with the progressive phase of the illness, this would be a useful drug.

Now, you and I both have the perspective that while drugs may be FDA approved for your condition, it's important to also go beyond the drug in terms of what is it that we can be doing if we have progressive MS or relapsing remitting MS, because many of the listeners will have relapsing remitting MS.

From your point of view, in addition to a highly effective drug for either relapsing remitting or for progressive MS, what else is important to be doing?

Well, I think, you know, I want to, I want to, if I can very briefly circle back around to some observations that are

indirect from these studies because it's really important.

Look, what have we learned, you know, about MS besides just does a drug work or not work. And there was a wonderful presentation, I actually sent it to you yesterday.

There's a lovely platform that doctors have access to, which is like watching an academic lecture every day on different relevant topics, say in this case in MS, and it's called Viewmedy.

But anyway, if we look at MS over a lifetime, so we talk about the average age at diagnosis as being somewhere around 35.

Age, DMT Decisions, and Functional Medicine

four years old, certainly is pediatric MS. There are a whole other set of issues to deal with when children get MS, but they certainly do. But what's very interesting, and this is something I learned yesterday and really never given much thought to it, is if we look at just the population in the United States and we just break down the population by age, we're the largest You know, it would say, you know, what's the largest population like 25 to 35, 35 to 45, 45 to 55, 55 to 65 and so forth.

So what we talk about the point is what we talk about MS is being a disease that affects younger people. In fact, the largest. group of people affected by MS, this growing, shifting population that's just getting older and older and older, it's not the young people, it's the older people, right?

Because that's the demographic of the United States. And so we are dealing, the average age, the largest number of people in that demographic age stratificate, you know, strata is something like 48 years old.

And why that's really important is, and this relates to your question is, as you know, whether I'm working with someone with Alzheimer's, whether I'm working with someone with Parkinson's, whether I'm working with someone with ALS or MS, these are not one disease, right?

There are common manifestations that I'll quote Dale Bredesen, our friend who says, you know, when you look at Alzheimer's disease and think about all the causes, it's like thinking about a roof with 36 leaky holes.

And so in order to tackle that individual You know, help work with that person was say Alzheimer's mild cognitive impairment due to Alzheimer's. We can't just target one thing.

We can't think of Alzheimer's as if it's just one disease. We can't think of MS as if it's just one disease. So what is observed, and this circles right back around to those B cell depleting therapies and the Bruton-Tarsing kinase inhibitors, is that earlier in younger people with MS, those 34-year-olds, even those children, the pediatric cases, that this disease is much more robustly expressed in the peripheral immune system, that it is a very immune-driven disease.

In fact, I just this past week saw a couple of new folks for my brain tune-up program, my functional medicine program, very aligned with Dr. Walls. And, you know, they were sort of very young people with very, very active disease, lots of lesions, lots of enhancing lesions.

Fortunately, from a disability perspective, they were good, but that does not speak for a good prognosis. And we certainly need to jump in on that. So if we think about, oh, I didn't say that those older folks, those 48-year-old plus, and by the way, Dr.

Walls, it led me to do some math. I hope it's OK. I know how old you are. Yeah, that's good. You want to say it publicly or whatever. But I went, OK, you're.

your video that went viral and kind of put you on the map, the 2011 Minding Your Mitochondria. And I said, how old was Terri Walls when she did that video?

How old was Terri Walls when she described her personal transformation, 2005, 2006, and that time frame of going from the tilt recline wheelchair to riding your bike?

Well, you were exactly that age. And what we learned, at least back then, back 20, 25, what we've learned about these older individuals is that the disease shifts from being more robustly peripheral immune, those active B cells crossing, getting into the brain and that blood brain barrier that's become leaky, like a leaky gut, to a disease that is more more compartmentalized, internal meaning the brain, right?

More involving mitochondria, minding your mitochondria, oxidative stress, right? Microglia. So now when we go back and look at these BTK inhibitors and say, why did they not work in relaxing remitting MS, but they worked in progressive MS, but the B cell depleters, which are really kind of related to BTK inhibitors, but they're a little more upstream, if you will, because they mess around with your peripheral immune system.

They're really effective, really, really effective in these younger people with relapsing remitting MS. So I think that is so super important to understand that when we say, what can we do from a functional medicine perspective, we're thinking about the big picture that everyone is unique and everyone is different and age does make a difference.

Yeah. Age, age, which then, you know, gets me to the next question. As we get older. Yeah. And people ask me this a lot. I'm getting older. Are the risks of the DMT that I'm taking now outweighing my benefit?

Because I know that relapses decrease over the age of 45, particularly over the age of 55. And at what age should I think about coming off? And I think that's a complicated question.

And I don't know that we have good research to guide. I tell people, I want to do functional medicine stuff to get you all fully tuned up. And my conventional neurology colleagues, we have some very interesting debates over what is the age where And they aren't doing what you and I do with the functional medicine stuff.

They just say, OK, we'll stop the drug because you're too old. What are your thoughts about stopping DMTs and how does age and your functional medicine approach interplay with that?

Right. Yes, and I apologize because I didn't fully answer your last question so we'll answer that now. And so, you know, as I've spoken for many years for you on what we have learned about discontinuing disease modifying therapies and since then there's been at least a couple of clinical trials, there's one called DISCOMS, but it's D-I-S-C-O-M-S, the DISCOMS trial, which was a multi-center randomized single-blind phase four non-inferiority trial examining the risk of new disease activity in multiple sclerosis patients who continue versus discontinue disease modifying therapy.

And for better or for worse, what the trial found is more or less what we've observed previously, which is that age is really the only major determinant that we have.

And we have to, again, treat everyone different. You can have all the hope in the world, and that's really important, but you also have to have objective data.

So we do want to circle, by the way, back around to that octave test, which none of these included. But some of the strongest data really looks at people who are older than 55 and even 65 or 60, just depending on the trial, where if that person has been clinically stable, There's been no changes on their MRI.

Their EDSS score is stable, no changes, no disability progression. Discontinuing that drug really only leads to about a 10% likelihood at worst of relapse or recurrent disease recurrence or progression.

So age is really the main factor. But if we flip it around and we say, OK, you're newly diagnosed with MS, How's it going to go? What does the crystal ball tell us?

Well, we know that while MS is more prevalent among women, men can do much worse with MS if they have spinal cord lesions, if they have what we call posterior fossil lesions, meaning like cerebellum, brainstem, if they have just

a large, large lesion burden.

The degree of their disability at the initial presentation, these are all major considerations when predicting, how's it going to go for that person? And we really have to take that into account when we talk about functional medicine, because I've taken a bit of a shift in that I was a conventional neurologist, and then I was like, wow, functional medicine, this is what I want to do.

And then I realized that both toolboxes have limitations. But together, they are very, very powerful.

Illness Narrative and Patient Readiness

And as long as we're approaching each individual person on that level, that you are a unique story, you are a unique narrative, your MS is not the same as Dr.

Wall's MS or mine or another person who might have MS, then we can say, I think it would be OK if that's what your motivation is to take this Wall-styled approach and hold off on disease-modifying therapy, versus another person who i'm going to look at everything and say i'm going to be honest with you and i'm even going to look at your readiness for change your willingness to make a commitment have you been able to sustain that maybe your ms disease activity score right because that's not even taken into account in any of these studies to say look you should always be following a wall-styled approach there is no reason that you shouldn't you know but For you, I'm also going to recommend disease modifying therapy.

And then we're going to track that, right? We can track your disease activity score, your MRI, your physical exam, all those things over time, your 25 foot walk, your peg hole test, all these things that we look at, you know, and then we can say, okay, you've done really well.

Everything's stable. Where are you in your heart and in your mind? in terms of stopping your drug. Because I can't tell you with 100%, certainly, where you're going to kick back into gear in terms of having active disease.

But I feel like you've done your homework and you've created a solid foundation for yourself. And if that's what you really want to do, I'm going to support you.

But we're still going to measure. We're still going to track. That is so important. Faith is very important. Hope is very important. Belief narrative is very important, very important.

But we still have to be sort of transparent and honest with ourselves. And if the numbers are going in the wrong direction or the MRI is going in the wrong direction, you know, you need drugs, you need drugs.

You should still be following the walls protocol. And to everyone who's listening, I want to reinforce that, yes, for some people, You can do really great with a functional medicine approach, no drugs, everything stays stable, and that's fine.

But others, you'll benefit so much from taking the disease modifying treatments. Ken uses them in his practice. I can't prescribe those drugs, but I send them back to the neurologist with a strong encouragement that, yes, I think you should do both.

diet, lifestyle, plus DMT. And depending on the circumstance, you might do perfectly fine without DMTs, but everyone, everyone who's listening, please be sure you're getting your MRIs, seeing your neurologist, making a very informed decision about how DMTs play in your care.

You mentioned another concept, the narrative, and you sort of glazed over that pretty quickly. Could you expand a little bit more on what you meant by a person's narrative on their illness?

So there's been a lot of work done in this concept of the illness narrative. The sort of pioneer of this work is a Harvard psychiatrist named Walter Kleinman.

Arthur Kleinman, my fault. Arthur Kleinman, who wrote a book called The Illness Narrative. And then for me, there was a very transformative, it was actually a PhD thesis done by a physician at Michigan State who took Kleinman's concepts and wrote his thesis on what was called the diagnosis narrative.

You know, we have, as long as human beings have been on the planet, and as long as there has been the spoken, and not necessarily the written word, but the spoken word, we have told stories.

Story is actually the most powerful thing that we have. It's more powerful than any drug. It's more powerful. Stories create every aspect of our reality.

My wife uses the word manifestation, right? Very important. And we play out story in many, many, many different ways through faith, through formal religion, through our own personal belief systems, what we tell ourselves, what we see.

We're in the midst right now of an election time with two very different know candidates and the two sides can't really talk to each other because the narratives are so different and the people that support one camp you know i don't get into politics here but you know we all know what i'm talking about right they don't see what's going on on the other side because they're so clung they've cleaned so hard to the narrative of the candidate they prefer.

So this is the same thing with our lives, with MS, with the symptoms that a person may present with. I'm coming to the doctor. I have painful loss of vision in one eye.

I have numbness on one side of my body. And then, do you have MS? That's often the referral that I get. This person may have MS. There are formal diagnostic criteria.

But what's very interesting, too, because much of our health and wellness and disease and illness is driven by a part of the brain called the limbic system that really receives information from all our senses, sight, smell, touch, sound, everything, and then decides, is it safe?

One of my favorite lines from a movie called Marathon Man, is it safe yet? uh and where or is it time to defend yourself to be in fight or flight and when you're in fight or flight no matter what is driving that physical imbalances emotional spiritual imbalances the brain will send out signals you may have muscle cramps you may have tingling you may become very sensitive to light you may have pain all over and in some ways those individuals can look like they have ms or sound like they have MS from the story they're telling, but when you do an MRI, when you go through the formal diagnostic criteria, they don't, right?

So, alternatively, they might have MS as you go through that evaluation, but you have to get that person to the point in their narrative of understanding what is going on That's my role as a doctor, a physician, some might argue a healer.

What is a healer? A healer commands the narrative in a very powerful way, the shamanism that is medicine. And when the person then hears that narrative, and that's the gist of that Michigan State thesis, is that then defines who they are.

That's the pivot point where once you believe, if I tell you the narrative that resonates with you, right? Then you're ready for change. But until you until I mean, if I use the wrong narrative, and you could come to my office of the completely preconceived notion, I have Lyme disease, I don't have MS.

right? And until that persists, you know, this is Lyme disease, I did the special test and nobody else can do, and you have Lyme disease, you're not ready for change.

And so, you know, I always say that even in functional medicine, our tests don't really diagnose things in functional medicine, not the way that we use conventional testing.

Our tests help us tell a story to our patients about who they are, what's going on with their body, and how,

ultimately, we can take a path toward healing.

So narrative is absolutely critical. And moving forward, narrative is critical, because you can say, I love Dr. Walz, and I love Dr. Walz. But I can't tell you how many people will come to my office, and they're in what we call that sort of contemplation stage, where, yes, they understand sort of But in fact, the work is really hard and they're not really ready for change, right?

They're not really ready to do the diet and the exercise and the mind-body work and get their sleep dialed and things like that. Yeah, you know, I think telling the story back to the patients so they can understand what's happening and have it make sense to them.

And as I'm listening to you, I'm sort of thinking about my time in the VA when I was very cognizant that as I'm helping people with their story and understanding, We had to have metaphors, a wide variety of metaphors that people could relate to as they would try to understand how they became ill and over what processes they had control over.

So it's interesting, we developed farming metaphors, engineering metaphors, auto mechanic metaphors, school metaphors.

Remyelination Research and Exercise

to help people understand and that it was most remarkable when people could tell the story back to me, tell their story back to me in a way that made sense to them.

And the folks who could do that were ready to really embrace the changes that were going to be very helpful to them. If people couldn't tell me back a story that made sense to them, I knew it just was not going to work out because they weren't going to be able to make any of the changes to improve their nutrition, improve their self-care routine.

Does that match your experience, Ken? It does. And sometimes those narratives are very obvious. And I've worked with veterans. I trained in VA hospitals.

And I love the veterans. I really do. But they're a great example. You'll see I have an 80-year-old guy walk in my office. He's still wearing his USS whatever hat, right?

I mean, he wasn't in the service. He's not been in the service for 65 years or something like that. But he's still got his, that's who he is, right? That's who he is.

So veterans very much, and you know, I am so grateful for the service of veterans. So when I say that, I don't want it to be misunderstood because a lot of bad stuff happens to people in their time of service and deployed, whether it's burn pits and Agent Orange and getting injected with peanut butter vaccines.

Those of you know what I'm talking about. But the reality is we also move through this thing called life. And so I have the person that comes in and they're, you know, experiencing symptoms and maybe they're obese and diabetic and they've been a smoker and they have dyslipidemia and all these other things and lived a high stress life and been pretty sedentary.

But by golly, it was the Agent Orange that did it, right? So really, it's really tough. It's a challenge sometimes to be, you really have to listen. And that's the art that unfortunately too often has been laid to the wayside in a world of conventional medicine where volume is king and you have to see as many patients as you can.

And you don't have time to listen to those stories. I do because I'm more of a functional medicine doctor. But it doesn't happen often enough. And that's why we get stuck on pills that no one's checking on.

And to your point, I say, look, you're on this cholesterol-lowering pill and a blood pressure pill. And I'm not telling

people to get off those drugs, by the way.

But I say, my narrative is if you have a clipboard and you're standing at the entrance to the emergency room, And you're, you're county people coming in with chest pain and coronary syndrome or a stroke.

And you say, Hey, by the way, you diabetic and you on medicine or you hypertensive you on medicine, cholesterol, you on medicine. They're like, yep, yep, yep, yep, yep.

So if you're taking that pill and thinking that it's just going to fix everything and prevent the bad stuff from happening, not happen. It it's going to happen.

Right. So I see folks who are diabetic and they feel that they're taking their medicine as permission to have a piece of cheesecake. that you can't do that, right?

And so it's a stepping stone. The drugs can be helpful, but we have to adopt these therapeutic lifestyle principles. Yeah, those meds for the high cholesterol, high blood pressure, they slow down the disease process.

And so they're very helpful. But unfortunately, people are not necessarily taking the time to reinforce just how critical what we do is for managing all of those internal medicine type diseases that I take care of that drive all the terrible neurologic diseases that you take care of.

One more thing I want to touch on before I let you go, Ken, is I know many people have this hope that there's going to be a pill that I can take or maybe an infusion that's going to tell my brain to repair all that myelin.

And I know there's many, many drug trials that are out there. Can you give us a quick update on what do you think? Is there going to be an infusion or a drug that will fix the remyelination problem that is happening as part of aging, as part of Alzheimer's, and of course as part of MS?

And for everyone who's listening, we all want our brain to get remyelinated correctly. Of course. We do. Yes, we do. So there actually have been a few investigational compounds, a biotin, high dose biotin has been looked at and compound called, and I may not be pronouncing it right, Bexarotene, which is a retinoic acid receptor, gamma agonist, and a monoclonal antibody that targets something called Lingo-1, where when Lingo 1 is activated.

It prevents remyelination. But unfortunately, all of these clinical trials have failed in their efficacy to promote brain remyelination. So even though it is certainly hopeful that we will soon maybe or eventually have something that promotes remyelination from a drug perspective, that does not exist.

However, Don't be too disappointed because there are some very good things that you can do that promote remyelination. And probably the biggest one is exercise.

Exercise promotes regeneration, nerve cell growth, and remyelination. So if we're sitting in our easy chair, as we've kind of alluded to this whole time, waiting for the drug to do something to us so we don't have to do it ourselves, well, do your walls exercise program because that makes a big difference.

There are some other things that may be supportive and I don't want people necessarily running out to the health food store and grabbing things off the shelf.

But it appears that CDP choline supports remyelination in women, particularly postmenopausal progesterone. I'm a firm believer in bioidentical hormone replacement therapy.

Finding the Practice and Closing Remarks

It appears that progesterone supports remyelination. Flavonoid compound quercetin may support remyelination. So there are things out there that, and again, most importantly, exercise.

Something's going to be fixed just with taking a supplement, but definitely exercise. We can do that today, even without a drug. You know, as we age, if you become mobile, it really accelerates the aging process, the atrophy, the demyelination that occurs with the aging.

And I know many people with MS, we are not exercising enough. We're feeling fatigued. And so it becomes hard. People ask me like, you know, I'm already exhausted by 10 in the morning.

How could I possibly exercise? What do you say to that, Ken? I mean, I think that, first of all, we have to meet people where they are. And we can start with simple things, maybe some chair yoga, maybe the e-stim that I know you're very, very fond of.

We have to get the body moving. It has to be a graduated exercise program. And then on the other hand, the people is, I asked them about exercise because a big component of what we do here at Charlotte Health and Neurology is neuro-fitness or neuro-fitness program.

Not everybody, we have Corey giving them their whole neuro fitness plan and working with them. And do you go home and actually do it? Well, I walk, I walk jog, I walk run.

Okay, but is that your neuro fitness program? Are you challenging yourself? Is there enough of a stressor, a dose of a stressor that's a healthy dose that actually stimulates your body to grow and change?

If you do the same thing over and over again, you're only going to get the same outcome, right? You're not going to grow. You're not going to change. So that use it or lose it, the other cliche that's very true applies here.

Okay. Well, Ken, this has really been wonderful. I always, always love our conversations. And again, everyone who's listening, I want you to know Ken's practice is where I send my complex patients.

And now that I'm not seeing patients directly myself, Ken's office is where I send all of the people who are coming, asking to come to my practice. So Ken, the most important thing here is how do people find you?

We have a website which is functionalmedicine.doctor spelled out D-O-C-T-O-R and you can go on that website and sign up for a free telephone consultation so we can learn more about you and make sure that your situation is a good fit and you'd be very happy.

But we see lots of folks, courtesy of Dr. Walls, and have done so for many years. We have many patients who are able to stabilize, even reverse their end.

We have cases of, one case in particular, of complete resolution of the MRI changes, which is astonishing to me. But it gives people hope that if they can emulate those changes, on an individualized level, they can have similar outcomes.

Thank you, Ken. Thank you so much. Thank you. Thank you for tuning in to Dr. Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

Each day is a new opportunity to make choices that empower your well-being. For more insights and strategies, subscribe to our podcast and visit our website, www. DrTalks.com.

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