MIGRAINE WORLD SUMMIT

TRANSCRIPT

INTERVIEWS WITH WORLD-LEADING EXPERTS

MIGRAINE, TMD & NECK PAIN

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Introduction (00:05): So, with migraine, people often also have coexistent neck pain with that. People often have pain in the back of the head. That's a very common location for migraine to occur. And people who have migraine often have pain in their jaw, their face, and the temples, as well. So my patients who have migraine — this all resonates with them because these are locations that they point out to me as being where things hurt quite a bit. And I think one way we can differentiate these things is by our clinical examination. So when I'm examining my patient, I am checking to see if they have any jaw clicking when they open and close their jaw. I'm also checking neck mobility to see how well they've got good range of motion and also checking for point tenderness along their cervical spine and over the occipital head region, as well.

Elizabeth DeStefano (00:53): Temporomandibular disorders (TMD), migraine, and neck pain are often interconnected in ways that can significantly impact our well-being. But how exactly are they related? And how do we tease apart what is a trigger versus a symptom versus the primary condition? Can TMD, a condition affecting the temporomandibular or jaw joint (TMJ) and surrounding muscles, trigger headache or migraine? Do neck strain or cervical spinal issues exacerbate TMD symptoms? Can migraine be triggered or characterized by both TMJ and neck discomfort? Understanding these complex relationships is crucial for effective management and relief. We are grateful to have the expertise of Dr. Rashmi Halker Singh, who will discuss TMD neck pain and migraine. Dr. Halker Singh, welcome back to the Migraine World Summit.

Dr. Halker Singh (01:44): Thank you so much for having me. It's a pleasure to be here today.

Elizabeth DeStefano (01:48): Many people with migraine have some type of neck issue that seems to be playing a role. Can you discuss how the neck can be involved in migraine?

Dr. Halker Singh (01:58): Absolutely. I just finished a full day of clinic, and this has come up in so many of my conversations with patients, including just today. It's a very, very common problem that people who have migraine will experience. And in some cases, it's part of their migraine, and in some cases, it's a completely separate problem. So I think we have to really take a step back and talk to our patients about exactly what they're experiencing and tease it out to really sort out: Is the neck pain part of migraine or is it something different? But in situations where neck pain is part of migraine, one way I talk to my patients about it is that we can kind of think of it as a referred pain situation. For patients who want a more in-depth explanation about what I mean by that, I'll talk to them about migraine pathophysiology and explain to them that migraine is a problem of pain processing. And there are these pain pathways deep within the brain that are responsible for migraine, and they have inputs from the neck. And so sometimes migraine can impact the neck and cause neck pain, as well.

Elizabeth DeStefano (03:11): So, Dr. Halker Singh, do you hear that people are talking about neck [pain] as a symptom of migraine that they can clearly identify as part of their attack? Or sometimes a separate issue that seems to trigger the attack but isn't part of it?

Dr. Halker Singh (03:28): So, both. And I think sometimes it can be very confusing, both to patients and to myself as their treating clinician. Because sometimes the neck pain can be the first symptom that they experience. Sometimes it can be there even between discrete migraine attacks, so even interictally, they might have neck pain. And sometimes it can be a lingering problem. So it's kind of hard to tease that one out. It kind of depends on the patient. I actually spend quite a bit of time talking to my patients about their neck pain, especially when they voice that this is a big problem for them. So we'll talk about their head pain, their other symptoms

that they're dealing with, and then go into detail about their neck pain, as well. Because I want to know about all the different symptoms that they're dealing with, so I can figure out how to best help them with all of their different symptoms that they're coming to see me for.

Elizabeth DeStefano (04:24): What about other conditions that can involve what is or feels like neck pain, for instance, occipital neuralgia?

Dr. Halker Singh (04:32): That's such a great question. So, a lot of patients will tell me about pain in the back of their head, which is where occipital neuralgia comes from. It's pain over the occipital head regions, and that's often related to — it can be related to migraine; it can also be related to problems in the neck itself, as well. And with that problem, people will have pain in very specific areas over the back of the head. It's typically described as a sharp shooting pain that can come on. I think it depends on the person, but there [are] some very typical features about it. People often have tenderness over the greater and the lesser occipital notch. If we push on these very specific areas, people can have some tenderness, and pushing on those areas can often reproduce their pain, as well. And I think about this in the context of treatment, because sometimes that might be a way that we might be able to help our patients. Because if they do have occipital neuralgia along with migraine or along with neck pain, that might be one way we can help them is maybe by giving them nerve blocks that might be helpful or referring them to physical therapy or other things like that.

Elizabeth DeStefano (05:42): What is cervicogenic headache?

Dr. Halker Singh (05:45): Cervicogenic headache is a condition. It's very closely related to occipital neuralgia, but in that situation, they have neck pain, and we often will see structural changes in the cervical spine. So maybe something that looks like arthritis or degenerative problems. We think of that structural problem as being maybe a cause or contributor to neck pain.

Elizabeth DeStefano (06:11): So what is TMD, and how is it related, or could it be related to migraine?

Dr. Halker Singh (06:18): So TMD is essentially problems of the temporomandibular joint. People can sometimes have arthritis in that joint, which is essentially the jaw joint. So when people open or close their jaw, they might feel some clicking or some cracking in that jaw joint, maybe some pain with chewing, things like that. And that can cause some pain, as well. It might even be referred up to the temple; people can have referred pain into that area. And we see that sometimes in people who have migraine. Sometimes you can appreciate that in people who have a lot of grinding, which many of us do, actually. And all these things can be related, as well.

Elizabeth DeStefano (06:58): So there's very clearly a possible connection between TMD, migraine, and neck pain, and a need to tease out how they're interacting with one another.

Dr. Halker Singh (07:08): Yeah, I mean, as we've done so much more research in migraine and related conditions, we have come to understand that CGRP [calcitonin gene-related peptide] is involved in all these pain pathways. And we do have an understanding that that might be involved with some of these other pain conditions, as well. That might be that underlying connection that's going on there, but even in a more simple idea, pain in one area of the head and neck can influence pain in other areas and other pain diagnoses, as well. So that's also another way to think about how they're all related.

Elizabeth DeStefano (07:48): So, let's talk about the overlapping symptoms and the challenges that can present. When it comes to TMD, migraine, and neck pain, what symptoms — and we've talked about some of them — can make differentiation and therefore an accurate diagnosis difficult?

Dr. Halker Singh (08:05): So, I think an accurate diagnosis between migraine, cervicogenic headache, occipital neuralgia, TMD dysfunction, those things have such overlapping symptoms. So with migraine, people often also have coexistent neck pain with that. People often have pain in the back of the head. It's a very common location for migraine to occur, and people who have migraine often have pain in their jaw, their face, and the temples, as well. So my patients who have migraine — it all resonates with them because these are locations that they point out to me as being where things hurt quite a bit. And I think one way we can differentiate these things is by our clinical examination. So when I'm examining my patient, I am checking to see if they have any jaw clicking when they open and close their jaw. I'm also checking neck mobility to see how well they've got good range of motion, and also checking for point tenderness along their cervical spine and over the occipital head region, as well.

Dr. Halker Singh (09:07): I also ask my patients about how long symptoms persist. I'll give you an example: Today, I saw a patient who lives with migraine, and they were sharing that their migraine attacks are discrete. So their attacks come and go; they don't have attacks every single day, but they have neck pain every moment of every day. And so, they themselves felt that the neck pain was a different problem and not related to migraine. So we were able to have that conversation and tease that out, and come up with a plan to investigate their neck pain based on how they felt about it. So I think asking those questions can be really helpful to decide what next steps are important, to kind of sort out what's related and what might not be related. So I think asking about that is helpful. Another patient might tell me that when their migraine attacks are treated, their neck pain also gets better.

Dr. Halker Singh (10:02): So I really ask about those questions as context clues to really help me decide how I might be able to help my patients and what might be a good next step or not. Because, as we know, it's not like a one-size-fits-all; everybody's very different with what they're experiencing, what they're living with. And then, based on all of that and their exam findings, we can also decide what might be a next step in terms of diagnostic workup. Do they need to see a TMJ specialist? Do they need neck imaging and things like that, as well?

Elizabeth DeStefano (10:38): There's also the issue of ear pain. In recent years, I often have what feels like ear pain after decades of living with migraine. This has driven me, because it's relatively new, to get checked for ear infections, have sinus ultrasounds, and so on. But I now understand that [it] is really referred pain from my jaw, and sometimes migraine prodrome, that goes away once I treat the migraine attack. But that's really not always easy to differentiate. So, do migraine and TMD often get confused with ear infections or other ear-related issues?

Dr. Halker Singh (11:18): Oh, absolutely. I mean, I have so many referrals from my colleagues in ENT [ear, nose, and throat] and colleagues in allergy because people are convinced that what they're dealing with is an ENT problem. Or, for obvious reasons, like "I have ear pain; this must be an ear problem; I need to go see an ENT doctor," I totally get it. And it's only once we do the appropriate workup — because if you came to see me saying I have ear pain, I'm going to send you to see my ENT colleague first to make sure it's not that. I don't want to miss anything either. And it's only once we sort out those pieces of the puzzle can we figure it out. So sometimes some of these symptoms — they, too, take a little bit of time to sort out. Because first of all, we

definitely don't want to miss anything else that might be going on either. That's always No. 1; we don't want to miss a secondary cause, and obviously, people who live with migraine can have other things happen to them, as well, right? So we have to be careful about all of that.

Elizabeth DeStefano (12:17): So, you talked about some of the steps that you take to tease things apart. And I'm curious about what one viewer from our community, Jill, mentioned in sharing that she gets tenderness around her TMJ. How can someone like Jill determine whether that is a trigger, or a result of migraine, or something solely related to the TMJ?

Dr. Halker Singh (12:45): So, I would have a lot of questions for Jill. I would first of all want to know: Has she been evaluated for TMJ problems? Does she have a preexisting TMJ dysfunction? Has she been evaluated for that, or does this pain occur — really, is it a predictable migraine prodrome-type symptom for her? Does it happen with her migraine attacks, and otherwise is that pain not present? I would also want to know how often is she having migraine attacks and is it something that is very frequent — her migraine attacks, are they very frequent, as well? So I would have a lot of questions to kind of sort that part out. And if she's someone who has infrequent attacks, and this is very typical of her migraine attacks and only happens with her migraine attacks, I think that helps us to kind of think: Well, maybe it's part of migraine. But on the other hand, if it's there a lot, it's there very frequently, and not so much tied to only when she's having migraine, then maybe it is a separate problem that's also contributing to her migraine pain.

Elizabeth DeStefano (13:51): So if someone has symptoms of both TMD and migraine, as well as neck pain, and you are really having to figure out what is a primary issue, what are symptoms — you mentioned some of the diagnostic tools that may come into play, and I'd love if you could share any that we haven't covered that are critical to that investigation. You mentioned imaging, you mentioned other colleagues who specialize in those specific areas. What other diagnostic approaches might be employed in teasing those issues apart?

Dr. Halker Singh (14:28): I do think it starts with a careful history-taking on the part of the clinician. I need to do my best to ask my patients all the questions to really make sure that I understand what they're going through. Because that's No.1, that's really the first step. And then it's a careful physical examination to then decide what would be the important test to take. And I think after that we can decide together whether we need to obtain any sort of imaging tests — MRI cervical spine or X-ray cervical spine — or if we need to image the TMJ at all.

Dr. Halker Singh (15:03): And then after we make those decisions, we can decide, do we need to just try treatment — migraine treatment — [to] see if this is going to get better? Sometimes we'll try that approach where we might try, "Well, I'm not quite sure what part of these symptoms are related to migraine," and we can try treating the migraine and see what symptoms are left over. Or do we need to, from the get-go, employ the help of other colleagues in other subspecialties, as well.

Dr. Halker Singh (15:31): And this is where it kind of depends on the needs of the patient to decide at what point to do what. But if we're going to use [the] help of other physicians, I might request the help of a pain physician for some injection treatments to the cervical spine, or a PM&R [physical medicine and rehabilitation] colleague to talk about other options for the cervical spine, or physical therapy maybe. Or maybe even a TMJ specialist. So those are the types of colleagues that I might be suggesting that patients see along with me as their headache neurologist.

Elizabeth DeStefano (16:04): How do person-specific factors like medical history — which you mentioned is so important in establishing the care plan — how do those person-specific factors, including age [and] comorbidities, help determine the most suitable treatment plan if you're looking at TMD, migraine, and neck pain all present?

Dr. Halker Singh (16:26): So I guess one way to think about these things is that secondary causes of neck pain do become — when I say secondary causes, I'm talking about things like arthritis, or degenerative causes, or something else going on in the neck that's causing neck pain or contributing to neck pain beyond migraine — they become more common with age actually. So if I have, say, a 20-year-old coming in to see me who's never had any history of car accident or other trauma and says that they have migraine and they have neck pain, there's a higher chance that the neck pain is probably part of their migraine disease, rather than an 80-year-old who comes to see me and they have migraine and they have neck pain, as well. We might be thinking in that situation the neck pain could be a separate problem that's also contributing to migraine. So we have to think about those things.

Elizabeth DeStefano (17:26): So, in discussing this topic, it's pretty clear how an interdisciplinary approach might be really critical. Do you have any recommendations for how we could facilitate effective interdisciplinary communication if we're someone who is living with multiple conditions that warrant that?

Dr. Halker Singh (17:48): What patients can do is perhaps think about their migraine treatment plan and what symptoms it's helping. So for example, if they think that their migraine treatment plan is helping their head pain, maybe their nausea, maybe their photophobia, maybe those symptoms are being helped, but maybe not so much their neck pain. I'm just kind of giving you an example here. They can go talk to their clinician next time they have an appointment, or message them or whatever, and let them know about that and say we need to have a conversation about next steps for my neck pain. And maybe that would look like imaging that at that point or talking to them about maybe they need to see somebody who specializes in neck pain or something. But I think it kind of comes down to what symptoms are being helped by the migraine plan versus what symptoms are left over.

Dr. Halker Singh (18:40): And you can kind of think about TMJ problems in the same vein. So, if the migraine plan is helping their head pain, their photophobia, their neck pain, but they're still having quite a bit of pain in their jaw, especially when they chew or whatever it is, they should bring that up with their care provider and let them know, "I think this is a symptom that's not fully addressed at this point. What should we do next?" And maybe they need to see what their clinician has to offer as a next step for that. And if that's still not helping, maybe at that point see a specialist for that symptom. I think that might be one way to seek that out.

Elizabeth DeStefano (19:23): So it seems like potential treatments in these conditions can run the gamut from medications, and therapies, and simple devices all the way to surgical intervention. Let's talk about treatments, starting first with pharmacological approaches. What are the most effective medicinal treatments for these conditions?

Dr. Halker Singh (19:45): If it is related to migraine, probably your preventive plan, whichever preventive treatment you're on, should be helpful for that. But if it isn't, I might think about adding on another preventive medication. Things I think about include things like amitriptyline, or venlafaxine, or gabapentin, or duloxetine. OnabotulinumtoxinA can also be helpful, as well. Nerve blocks can also make a difference, too. So these are all things that we think about when

we talk about medications that have good benefit for migraine that may also be helpful for TMJ problems and for neck pain associated with migraine.

Elizabeth DeStefano (20:25): And when we're talking about this potential host of conditions, what about nonpharmacological or nonmedicinal approaches? And are those approaches complementary to pharmacologic approaches, or can they stand alone?

Dr. Halker Singh (20:42): Also a great question, and this is where it kind of depends on the needs of the patient, and their perspective, and what they want from their plan. I do discuss physical therapy. I think that can make a big difference. So can things like relaxation therapy, cognitive behavioral therapy (CBT), those things can also be helpful. If people have quite a bit of jaw pain and TMJ problems, sometimes even getting a night guard and splinting can also be helpful, too. So there [are] lots of different things that we can think about.

Elizabeth DeStefano (21:12): So for the TMD-related issues in particular, whether it's standalone or triggering migraine attacks or other headaches, considering some of those oral devices, as well as relaxation, could potentially benefit both, of course. What about physical therapy or exercises for that area?

Dr. Halker Singh (21:30): Some people find them to be helpful too, and I think there's no harm in trying. So if we're thinking about risk versus benefit, I really think that's a good idea. Some people find them to be helpful, and especially for cervicogenic headache and neck pain associated with migraine, I think physical therapy can make a difference for a lot of people. So, when I think about risks and benefits, I think physical therapy has a lot to offer.

Elizabeth DeStefano (21:57): We hear some people talk about chiropractic and other approaches in that vein to mechanically impact neck pain, whether it's standalone or exacerbating another condition. What are your thoughts on that? Are there any cautions you would give about those types of approaches?

Dr. Halker Singh (22:16): There is one concern with mechanical adjustments that chiropractors sometimes use, which is that rapid neck movement that sometimes is done. There's a rare risk of causing stroke with that. So as a neurologist, I have to caution my patients against that for that very specific reason. It's a rare risk, but rare is still present. And so, I think physical therapy might be a safer option, or even massage therapy or something like that. That quick, rapid neck manipulation that can be potentially harmful.

Elizabeth DeStefano (22:49): And if someone is pursuing nonpharmacologic approaches like massage or physical therapy and they're not finding benefit to their neck pain, could it be because that neck pain is actually part of the migraine itself? We have a viewer, Amanda, who said that she hasn't found relief — specifically for neck pain — despite trying massage, chiropractic, osteo, physio. [She] wonders if that might be because this isn't, in fact, mechanical but part of that migraine complex.

Dr. Halker Singh (23:20): Absolutely. I literally had that conversation with a patient today who asked me that exact same question — who has significant neck pain. Those things have not been helpful. On examination, they have great range of motion, they have no tenderness. And we had the whole conversation that this is probably part of migraine, so let's try putting them on like a more comprehensive migraine plan — and see if that helps with their neck pain, too.

Elizabeth DeStefano (23:50): What about surgery? When might surgery come into the picture when these conditions overlap in one individual?

Dr. Halker Singh (23:58): So, I usually don't recommend surgery unless there is something really — this is where the neurological exam becomes really important. And I do a careful neurological examination on all my patients, because surgery doesn't always help the pain. And so, if someone has other abnormalities on their neuro exam that suggest that there might be a problem with their spinal cord, they might benefit from seeing a neurosurgeon. But the pain is not always helped with a neurosurgical intervention. And I caution patients just because it's a big risk to undertake without the guarantee of benefit.

Elizabeth DeStefano (24:39): Is surgery ever explored in collaboration with a TMJ specialist for that particular area?

Dr. Halker Singh (24:47): We do talk about that. That's a little bit different than going into the cervical spine.

Elizabeth DeStefano (24:53): So TMD, migraine, and neck pain can be issues that are persistent throughout many years, or a lifetime, potentially. What strategies are relevant when you're thinking about long-term management to improve quality of life?

Dr. Halker Singh (25:09): So, I think staying as active as possible is really important. We talk about this as part of a migraine treatment plan with all patients. Exercise can really make a big difference. This goes back to the SEEDS to success with migraine that many of us talk about with our patients. And this goes beyond medications, beyond devices, but just the things that we think are a part of healthy living, but keeping your muscles as active as possible, keeping our bodies moving as much as possible, can really be helpful with neck pain and other things, too.

Elizabeth DeStefano (25:48): And just to pause, in mentioning SEEDS, you're referring to the acronym that stands for Sleep, Exercise, Eating, [Diary], and Stress management, correct?

Dr. Halker Singh (25:58): Yes, that's exactly the one. So this would be one of the E's. Yes. Exercise.

Elizabeth DeStefano (26:04): And sometimes, when those of us who live with migraine hear exercise, it can be a little bit intimidating to think about, especially with high-frequency migraine. How to exercise when we are in pain or in fear of pain. And that exercise can take the form of a low-impact type of approach, can it not?

Dr. Halker Singh (26:26): Absolutely, it can be low impact. And I tell my patients, be gentle with yourself. Give yourself grace in these moments. It is hard. It's absolutely hard. And a colleague told me once, and I love this recommendation, which is: Plan for more opportunities just so that if you can't accomplish all of them, you still have some opportunities that you *can* plan for. So let me say that in a realistic way: So there [are] seven days in a week. Migraine's very unpredictable for many of us, even people who live with daily pain. There are times when we feel we can accomplish a little bit. Times when we feel like we can't accomplish that much. We all know our own bodies. And so, if you say, "OK, I'm going to try for 10 minutes, 20 minutes every single day," fully knowing that there are some days where that might not be possible. You still give yourself that opportunity every single day, and maybe you can hit that mark three days

out of seven or something. And that's still something. And I really like that. It resonated with me quite a bit.

Elizabeth DeStefano (27:28): What a great self-care perspective really in thinking about how, if we're living with multiple conditions like this, how to minimize their impacts on our quality of life and still empower us to live life.

Dr. Halker Singh (27:40): Yeah.

Elizabeth DeStefano (27:40): Are there any final thoughts you'd like to share with the audience, Dr. Halker Singh, on the convergence of TMD, migraine, and neck pain?

Dr. Halker Singh (27:51): I think this is an exciting time as we better understand pain, pain pathways. There are a lot of advances going on in science and research, and I really think that as we look to the future, we'll have a better understanding about what all this means, and hopefully that'll translate more to treatments, as well.

Elizabeth DeStefano (28:10): Where can we learn more about you and the work that you do?

Dr. Halker Singh (28:14): Well, I am on the American Migraine Foundation. I'm on the board of directors of the American Headache Society. I'm very involved with the International Headache Society, as well.

Elizabeth DeStefano (28:25): Dr. Halker Singh, thank you so much for joining us to speak about TMD, migraine, and neck pain. We appreciate you being here.

Dr. Halker Singh (28:34): It's my pleasure. Thank you for having me.