Episode 204: Trigeminal Autonomic Cephalalgias (TACs)

Lindsay Weitzel, PhD:
Hello everyone, and welcome to HeadWise, the videocast and podcast of the National Headache Foundation. I'm Dr. Lindsay Weitzel. I'm the founder of Migraine Nation, and I have a history of chronic and daily migraine that began at the age of four. Our guest today is Dr. Deena Kuruvilla.

Hello Dr. Kuruvilla, how are you today?

Deena Kuruvilla, MD:
Good. How are you?

Lindsay Weitzel, PhD:
I am great. Thank you for being here with us. Dr. Kuruvilla is a board-certified neurologist and headache specialist. She is also the Director of the Westport Headache Institute in Connecticut and has authored numerous articles, book chapters and research publications in the area of headache medicine. I'm excited that she's here today, and she's going to help us learn about something that we haven't talked about.

We're putting it all together in one podcast because we're talking about some rare forms of headache today, but they're important for us to learn about. We're going to talk about the trigeminal autonomic cephalalgias, or most people just call them TACs. And she's going to give us some of the specifics of what these headaches are about, what they feel like, etc., how they're treated.

Thank you so much for being with us here today, Dr. Kuruvilla.

Deena Kuruvilla, MD:
It's my pleasure. Thank you for having me.

Lindsay Weitzel, PhD:
The trigeminal autonomic cephalalgias or TACs, thank goodness we have an acronym for that, are an interesting topic to cover. They are a group of headache types that are not common. There's technically about four main subtypes of these headaches that fall under this category. Let's start about talking about what trigeminal autonomic cephalalgia means and what these subtypes have in common.

Deena Kuruvilla, MD:
The trigeminal autonomic cephalalgias are a family of headache disorders that are really characterized by really specific symptoms that come with the pain. Usually, people that experience this family of headaches have pain that's only on one side of the head. And it's associated with things like a runny nose, kind of congestion, bloodshot eyes. And all of these symptoms are typically on the same side of the discomfort.

Lindsay Weitzel, PhD:
That is interesting. It almost sounds a little bit like allergies. I can see where people might get a little confused. Let's delve into this since the TACs all involve the autonomic nervous system. Is it believed there's a common cause? Do we have any idea what the causes are, why these headaches occur?

Deena Kuruvilla, MD:
So we have no idea why these headaches occur, but we do know that there's an association with what we call the autonomic nervous system. This is a nerve bundle. Nerves that runs through our body and becomes activated in this headache disorder. And that's why we end up seeing what we call autonomic features, such as that congestion, runny nose.

It can even be swelling on one side of the face, drooping of the eyelid, fullness of the ear. But all on that one side. We also know that there's an association with these headache disorders and specific parts of the brain that are connected with our body's alarm clock, the circadian rhythm. So interestingly, we can see some of these headache disorders in this family pop up during the longest and shortest days of the year.

Lindsay Weitzel, PhD:
The only type of headache in this group that we've really covered on HeadWise previously is cluster headache. Cluster headache is considered to be one of the worst types of pain known to man. So, let's start by giving a few characteristics of cluster headache.

Deena Kuruvilla, MD:
Most people with cluster headache, also known as alarm clock headache because oftentimes it wakes people up in the middle of the night with a searing and a stabbing pain on one side of the head. Cluster headache is known as suicide headache because of how severe it is. It lasts anywhere from 15 minutes to 180 minutes, and people are often very restless with this headache. They're pacing the floor of their bedroom and they can't sit down and rest.

Lindsay Weitzel, PhD:
Cluster headache is very painful. It causes irritability and pacing, as you said. How do we treat it?

Deena Kuruvilla, MD:
Cluster headache should be looked at from two different standpoints for treatment. One is a good preventive approach when a cycle starts. Cluster headache usually comes in cycles, usually during the fall or winter months. And it can stay anywhere from a couple of days to several weeks. We usually start off with something for prevention and then something for emergency treatment when an attack happens.

Lindsay Weitzel, PhD:

We do use some of the medicines that we use for other headache types in clusters you just mentioned. Are there any special treatments that are mostly just for cluster?

Deena Kuruvilla, MD:
For preventive treatment when somebody goes into a cycle, the things we think about are topiramate, which is used for migraine, as you may have discussed it at previous podcast, verapamil, which is a blood pressure medication that's really more useful for cluster headache than migraine. We use a medication called galcanezumab, which is a medication that is also used for migraine, but it's used differently for cluster. That's just a few for prevention.

For as needed treatment, oxygen is the first line as needed treatment. But it's so difficult to get for patients in the real world. Then we use some medication that we also use for migraine. We use sumatriptan injection because it works pretty quickly and zolmitriptan nasal spray, which also works pretty quickly.

Lindsay Weitzel, PhD:
There's lots of options. There one a little different than what we do with other headache types, but difficult to get. But very interesting information for cluster headache.

Next on the list of TACs is something called hemicrania continua. This comes from the Latin words meaning one side of your head and continuous, which does not sound like fun. Can you tell us what some of the main features are of this type of headache?

Deena Kuruvilla, MD:
Sure. Hemicrania continua is similar to the other trigeminal autonomic cephalalgias in that it's stuck on one side of the head. So, people will say they have side locked pain just on the right or on the left. And it's continuous. It sits there all the time. And they do notice, well with cluster headache we see that droopy eyelid, bloodshot eye, congestion, runny nose more prominently. With hemicrania continua, usually what I see from my experience is that it's very subtle. People may say they just have some mild fullness on the side of the pain. They may experience some facial swelling on the side of the pain and very subtle drooping of the eyelid.

While the symptoms may be more subtle, they do end up telling you that clue is that the pain's only on one side all the time. A lot of people ask me, why do I need to know if it's hemicrania continua? Is it one of these other trigeminal autonomic cephalalgias?

And the answer is the treatments can be completely different and can be diagnostic. For example, for hemicrania continua the way to diagnose and treat it is with a medication called indomethacin.

Lindsay Weitzel, PhD:
That is very interesting. But I can kind of relate to that statement I don't care what it's called, just fix it please, if you're in enough pain. Very interesting. That one has kind of its own medicine to treat it and diagnose it, so that one's kind of different than some of the other ones we talk about.

Is there another type of hemicrania continua based on how long it lasts? Is there a shorter version?

Deena Kuruvilla, MD:
Yeah. It's under that trigeminal autonomic cephalalgia umbrella, that TACs. I'm just going to start saying TACs because it's a mouthful. But under the TACs, the one thing that differentiates these different TACs is how long they last. We talked about cluster headache being from 15 minutes to around 150 to 180 minutes or so.

And then we have hemicrania continua which is continuous. Then we have this other TAC called paroxysmal hemicrania which is usually under 30 minutes. The episode lasts for under 30 minutes but looks exactly like hemicrania continua. It's also diagnosed and treated with indomethacin.

Lindsay Weitzel, PhD:
I just want to make sure since I told everyone there were four categories. I didn't want people counting and wondering if we left something out. The last two are always talked about together because they're very similar and they're very rare. They are called SUNCT and SUNA. People always refer to them by their acronyms because their full names are just terrible. I will go ahead and say what they are once, and then everyone's going to be like, Lindsay, why did you torture us.

The first one, SUNCT, stands for short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing. I'm going to pause on that one. And can you just quickly define conjunctival and neuralgiform for everyone. And then I'll move on to what SUNA means.

Deena Kuruvilla, MD:
You brought us to our fourth type of TAC. Now what really differentiates it is that with this particular headache type, is it only lasts typically for a couple seconds or minutes. And with this one it's just like a zap or a zing that happens on one side of the head that can have those features we talked about like the droopy eyelid, bloodshot eye, runny nose, fullness of the ear.

But why is it SUNCT, the C and the T, conjunctival injection and tearing. Conjunctival is a layer that's just on the eyeball between the eyeball and the eyelid, where we typically see that people have that fullness in the blood vessels and it causes that bloodshot eye.

Lindsay Weitzel, PhD:
What is neuralgiform, because that's what the N in SUNCT stands for.

Deena Kuruvilla, MD:
Neuralgiform means a nerve type pain. We have so many different terms out there to define nerve type pain. People say nerve pain, they say neuropathy, they say neuralgia, they say neuralgiform. They say burning, stinging, stabbing. There's so many different types of ways to say nerve pain.

Lindsay Weitzel, PhD:

I said it's two. There's SUNCT and SUNA which is similar. And it stands for short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms. So is there anything extra you'd like to say about SUNA. Or do you want to say anything more about the two put together?

Deena Kuruvilla, MD:
What really differentiates SUNA and SUNCT is that with SUNCT we're seeing bloodshot eye on the same side as that couple seconds we see the pain and the tearing. With SUNA, we don't see those symptoms as predominantly, but it is that couple seconds to minutes of stabbing pain on the one side. That's why these two are grouped together because they're so similar. The other thing that really differs with this fourth headache type is the treatments.

Lindsay Weitzel, PhD:
How do you treat it?

Deena Kuruvilla, MD:
One of the different ways that we can approach treatment is with the seizure medications. We were talking about this on the previous podcast with trigeminal neuralgia, but we use some of the similar medications. One of them is called lamotrigine, which was developed as a seizure medication but has been found to likely be effective for SUNCT and SUNA. Oxcarbazepine and carbamazepine, which are also both were developed as seizure medications, but do treat the pain of SUNCT, SUNA, and another facial pain disorder called trigeminal neuralgia. These are some of the few that we can use for this condition.

Lindsay Weitzel, PhD:
I do have one last question that I always like to ask whenever we're talking about one of the TACs. Whenever we talk about cluster headache or anything, because I want to clarify this for people who have migraine, some people with migraine may experience a little bit of tearing sometimes.

We call that migraine with autonomic symptoms. Can you clarify that so that just in case we have someone with migraine that gets some of these symptoms. We don't want them thinking that they might have something totally different based on what we've told them today.

Deena Kuruvilla, MD:
That is such an excellent point to bring up because so many things are misdiagnosed this day and age. Coming in with one of these headache disorders, many people have been diagnosed with sinusitis many times and taking rounds and rounds of antibiotics or had sinus surgery. In the same token, people with migraine can have pain only on one side of the head. And many times they can also have these autonomic features of droopy eyelid, bloodshot eyes, runny nose. The difference between TACs and migraine is that with migraine we're typically seeing some of the other more common features of migraine, such as sensitivity to light, loud noise, nausea, potentially vomiting.

We're seeing that there may be a hormonal association. It may be more severe closer to one's menstruation, or after childbirth. With migraine, we're also seeing a stronger family history, people

who have parents or grandparents or children who have migraine. These are just things that make it more likely to be migraine than a TAC.

Lindsay Weitzel, PhD:
I think that's so important because I always had right sided migraine. And as I got older, I every once in a while, just rarely get one on the left. And it always came with this teary eye and a couple of weird things. And so when we started talking about these symptoms on the podcast, I always was making sure that everyone with migraine knew that sometimes they might get some of these symptoms, and it didn't necessarily mean it wasn't migraine.

Thank you so much for joining us and for this very educational podcast that is a little bit more complicated. And you made it very simple for all of us to understand. And thank you so much for doing that. And thank you everyone for joining us today on our TACs episode. Was there anything you wanted to add before we went?

Deena Kuruvilla, MD:
I don't think so. I think the bottom line is there are so many wonderful resources out there for people who have headache disorders, and no one should suffer in silence. Go get help from your primary care doctor, your neurologist, whoever it might be, and really seek out the right diagnosis.

Lindsay Weitzel, PhD:
All right. Well, thank you so much. And everyone, please join us again on our next episode of HeadWise. Bye bye.

Deena Kuruvilla, MD:
Thank you.