Types of Pain and How to Treat Them

You can listen to the audio of this talk at: https://youtu.be/BcvtjKBsZ18

Dr. Justin Abbatemarco: [00:00:00] Janet, thank you for the kind introduction. So my name is Justin Abadamarco. I am an autoimmune fellow at the University of Utah. It's a real pleasure to be here and to talk on this really important topic, neuropathic pain in neuroimmunology.

[00:00:15] Some of the objectives I want to do, it's a quick talk, but I wanted to discuss some of the common terminology we use and that you'll hear about in the clinic. Some of the epidemiology or how common neuropathic pain can be in these rare disorders, and we'll end on a few treatment options before I hand it off to Dr. Poon to talk about spasticity.

[00:00:35] So this table just outlines a few terms that you may hear in clinic to describe neuropathic pain within these rare disorders. Some common ones that we'll hear about are trigeminal neuralgia that can be this lancinating or electrical shock pains across the face. It can last a few seconds, but can be absolutely disabling. Fortunately, we have some really good medications for that which we can talk about. I think some other really common things we hear, migraines are a really common comorbidity in neuroimmunology. And it's really important to address those. Some other common syndromes that we hear about are sensory or dysphacetic paresthesias those are some of the terms we use. But basically that encompasses these feelings of burning, tingling, tightness, or pins and needles sensation. And the last part I don't think we talk about very much in the clinic and we should.

[00:01:35] It's the fancy term is iatrogenic, but really that means that it's induced or caused by something in the healthcare field and that can include maybe injection site reactions related to the medications we're administering but can also be side effects related to some of the medications we use like steroids

[00:01:53] Sometimes words don't do a good job in terms of picture's a thousand words and I thought this picture did a good job encompassing kind of what it can be like, what it can feel like on a day to day basis. So what do pins and needles feel like? What does a lancinating pain kind of come on face, neck, or back, what does that feel like? And I thought this illustration did a good job kind of highlighting some of that. Without using some of the fancy terminology we use in clinic.

[00:02:22] I wanted to move on a little bit, talk about the epidemiology around how common pain is in our patient populations. We'll use multiple sclerosis as an example just because we have so much data there. So we can see that this group kind of surveyed multiple sclerosis patients and found 50 to almost 90% of patients experienced chronic neuropathic pain on a day to day basis and when we're comparing that to other neurological diseases such as Parkinson's disease or Alzheimer's disease, right? These numbers are much, much higher. And then when we move out of some neurological conditions into cancer oncology, we're seeing that those numbers are almost similar to

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those that are being actively treated with chemotherapy. So pain is very, very common in our populations.

[00:03:10] We do have some good data with regards to pain in neuromyelitis optica or NMO, NMOSD and so this group was actually comparing NMO patients to MS patients and just a few things to highlight here, right? You can see that the vast majority of NMO patients are experiencing pain. When we're looking at their pain scale, right? It's almost three times higher in the NMO group compared to MS and the pain that they're describing is constant. It's a constant pain that is interfering with day to day activities.

[00:03:48] This is doing something similar with comparing NMO to MS, but they kind of went a step further to see how that pain was interfering with both personal and professional activities. So whether the ability to walk sleep but again that similar trend is present, right? The NMO patients are experiencing much more constant and severe pain which would be a real detriment.

[00:04:19] This slide talks a little bit about pain in a different perspective. So this group looked at 211 MS patients and wanted to kind of qualify how much cost, indirect and direct costs are associated with neuropathic pain and I thought their findings were interesting, right? Some of the things that we would think about, right? How many patients see a doctor emergency room visits, but some other things they were able to quantify such as lost time at work or lost time leisure activities and I think its overarching point is that neuropathic pain is common in this population and it's really disabling.

[00:04:59] So Doug Anchorman is a comedian diagnosed with MS in the 1990s and he has some great cartoons that kind of make light of some situations and I thought this was very applicable. I know many of you have undergone MRIs multiple times and I thought this was a funny way to kind of illustrate that, but I want to be respectful for time so let's go on to treatment a little bit.

[00:05:27] So how do we approach this condition, right? And I use this diagram just to illustrate how complicated the underlying pathophysiology of pain can be and to also make the point that it requires different strategies in order to address it. Whether it be medications or in some instances even an auto core stimulator or surgical procedures to help manage some of the pain that they experience in this condition.

[00:05:57] So let's start with some common medications. Medications you guys have probably heard about. These first three are some of the main stay treatments we use for neuropathic pain. So tricyclic antidepressants. They were developed in the 70s for depression, but they're not very effective for that condition, but very effective for neuropathic pain and migraines. Our SNRIs are also in that antidepressant kind of category, but we've found them very effective pain relievers and those include venlafaxine and duloxetine, also called Effexor or Cymbalta. [inaudible 00:06:45] gabapentin, or pregabalin, and Lyrica. And those are also some medications borrowed from other neurological diseases that we found very effective. I just want to touch base on this other category. This is a category of medications we use commonly at the University of Utah, anti-seizure medications like carbamazepine or oxcarbamazepine can be very effective in reducing some particular types of pain. Especially those with those electric shocks.

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[00:07:07] And I don't want to take away because Dr. Poon is going to be talking a little bit more about spasticity and how that's managed, but I just want you to know that sometimes we use our anti-spasticity medications as [inaudible 00:07:29].

[00:07:21] I would be remiss if we just focused this talk on pharmacological management for pain. I think pain requires this holistic approach to the treatment. One of the big things I try to focus on in clinic is education. What is the goal for what is the goal use one of these medications in the clinic? And usually it's not to get rid of pain. Unfortunately don't have that magic wand to get rid of pain. Our goal is to increase functionality. And so I ask patients what we're trying to accomplish. Sometimes it's better sleep. If pain is interfering with their sleep, that will have this kind of cascading effect throughout their day. So we focus on sleep, sometimes it's activities that they want to do maybe with children or friends. And so we, I try to really focus in on what we're trying to accomplish because setting realistic expectations can be helpful.

[00:08:16] I can't overemphasize the importance of activity. I know it can be really difficult to exercise on a regular basis if you're not feeling well and you're in pain, but we know that even just small incremental changes in activity level, five minutes of walking every day, increasing it to six maybe the next week really has some beneficial effects and some other behaviors that we listed below.

[00:08:40] And the last slide that I want to leave on was this link between depression and pain and we know, [inaudible 00:09:06] that pain and depression are very common comorbidities. So they're linked together and when they are, patients will report worsening on their depression scale and pain scale. So it's really important to address both of those things when trying to adequately treat neuropathic pain. The analogy I usually use in clinic is depression's not causing pain. The pain is not in your head. It's amplifying it. It makes it much more prominent and disabling. And we know that an effective treatment strategy involves treating both of those things.

[00:09:24] Questions will be after in the symposium. So I look forward to those, but without further ado I want to introduce my colleague and friend, Dr. Jason Poon. He works with me at the University of Utah in the neuroimmunology department and he's going to be talking a little bit about spasticity both management and treatment.

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