

Back Pain Management – Alternatives to Opioids

Transcript

Christopher Griggs, MD: Welcome to Emergency Response, Safer Opioid Prescribing in the Emergency Department. This is a supplemental podcast, and my name is Christopher Griggs. I am an Associate Professor of Emergency Medicine at Carolinas Medical Center. And with me, I have two stellar residents who work with me in the emergency department here. Jeremy Driscoll and Travis Barlock. Can you guys go ahead and introduce yourselves?

Jeremy Driscoll, MD: Hi. I'm Jeremy Driscoll and I am a PGY3 here at Carolinas Medical Center.

Travis Barlock, MD: Hi. I'm Travis Barlock. I'm a PGY1.

Christopher Griggs, MD: We're going to talk about three very important areas in emergency medicine. One approach is to back pain and how to manage back pain. We're also going to discuss abdominal pain and management of abdominal pain in the emergency department using multi modal strategies. And then, talk about harm reduction in relation to Opioid Use Disorder, which commonly we see in the emergency department, and it can be a struggle to manage that while we're also managing pain.

So, we're going to jump right in here and talk about back pain. So, Jeremy, can you take the lead?

Jeremy Driscoll, MD: Back pain is one of the most commonly encountered chief complaints in the emergency department setting. And the economic impact of back pain is huge, and it really stems from prolonged loss of function resulting in loss of work productivity; treatment cost; disability payments by the government. And the AAFP estimates this to be anywhere between 12.2 and 90.6 billion dollars in the United States every year.

Most individuals are going to experience some form of back pain during their lifetime, with most episodes occurring usually between the ages of 20 to 40. While most cases resolve without intervention actually at all, it's estimated that patients with their initial episode of low back pain may not actually fully recover until at least six months.

There have been several studies that show that recurrent back pain can actually occur in up to 62% of patients within two years, and with that, there are varying degrees of severity.

The initial assessment of patients with back pain in the emergency department can be divided into acute versus chronic pain. Although most patients with acute low back pain recover after about six weeks at the latest, chronic back pain, as defined by the International Association for

the Study of Pain, is pain that has persisted beyond normal healing time, which is estimated to be about three months.

Christopher Griggs, MD: So, Jeremy, if a patient comes in with back pain and they've had back pain before, is it chronic if it's recurrent or is it chronic if it's been persistent over three months? So, if they've had an episode for a week but it got better, but then got worse again, how do you distinguish that?

Jeremy Driscoll, MD: How I distinguish it is, usually if it's diagnosed in the past and I have an issue of back problems, and basically if constantly it's been there for three months, then that's an easy definition. It's chronic back pain. But patients often have a daily low back pain and acute exacerbations of it as well. It may be gone for a couple of weeks. So, usually if I ask a patient if they still have the same back pain in the same location despite if it went away for let's say a few days or a week, I would consider it chronic after three months at that point.

Christopher Griggs, MD: And are there different neurological mechanisms kind of undergoing whether it's chronic or acute?

Jeremy Driscoll, MD: Yes. There are actually pathophysiologic mechanisms that really define what type of back pain, and this is really helpful for emergency department providers because it definitely changes what your treatment options are.

So, the big classes of back pain are either nociceptive or neuropathic. And like I said, it's really important to identify what type of pain a patient is presenting with because it's an important step for us to guide treatment, whether it could be pharmacologic or nonpharmacologic interventions as they do differ depending on the type of pain.

Let's talk a little bit about neuropathic pain first, and this is probably ones that we see very often. This tends to be more in the chronic back pain syndromes, while nociceptive pain typically has the etiology of acute back strains. And we can further break down nociceptive pain into mechanical or inflammatory subtype.

Very commonly, we'll see the mechanical nociceptive pain, and that's with conditions like disc herniations, spondylosis or spondylolisthesis, vertebral body fractures from trauma, kyphosis and scoliosis. The inflammatory subtype is typically due to underlying immune conditions like spondyloarthropathies such as ankylosing spondylitis, psoriatic arthritis and Reiter's disease.

Christopher Griggs, MD: I've had patients that come in, they have chronic back pain for five, six, seven years. It seems like they have some neuropathic component to their back. But then they also get worse in that day because they did something and strained their back. So, you can have both an acute and chronic back pain at the same time that has both nociceptive and

neuropathic properties to it.

Jeremy Driscoll, MD: Yes. I think that's a really important point. And once again, your treatment is going to differ depending on what they're presenting with and what a good history and physical examination can tell you about the type and etiology of their back pain.

So, back to types of back pain. Let's talk about neuropathic pain now. Like I said, this is mostly due to chronic pain syndromes. And it's really defined as a pain as a result of a central or peripheral lesion in the somatosensory system. Some examples that we typically see in the emergency department for neuropathic pain are post-stroke pain, post-herpetic neuralgia is pretty common that I see in diabetic types of pain, complex regional pain syndromes. And previously mentioned, really this is just chronic low back pain most often.

We will discuss some pharmacologic options in another part of this series. However, briefly, with neuropathic pain this is going to be most responsive to Gabapentin and Pregabalin and these are really common medications that I know I use, and I think some of us here use when we see these patients coming in with chronic low back pain in the emergency department.

Christopher Griggs, MD: So, when you give Gabapentin in the emergency department, are you starting at a low dose or for when they're coming in and they're having severe pain do you give a higher dose?

Jeremy Driscoll, MD: I usually start them at a lower dose, especially if it's someone who doesn't have maybe much exposure to pharmacologic management, whether that's through NSAIDS, Acetaminophen, and if they've never had this type of medication before I usually start a low dose. With Gabapentin probably about 200 mg and often will prescribe that for them if they did see a brief response in the emergency department for up to three times a day.

That way, I think you have a little more lee-room for in the future that if their back pain does get worse, you can increase their dose.

Christopher Griggs, MD: My experience is I'll even go up to 300 mg, one time dose if they're having severe pain in the emergency department, and I think there's a neuropathic component. But certainly, if they've been on Gabapentin for a while, I might up the dose that they're already taking along with considering other multi-modal strategies.

Jeremy Driscoll, MD: I think that's an excellent point. And then finally, we'll talk about another type of pain that I very often see more of in our acute care side or urgent care side. And this is myofascial pain. And this is a really important type of back pain treatment I really like to perform here in the emergency department that actually performs a procedure versus pharmacologic treatment. But this is myofascial pain and it's caused by myofascial trigger points.

Patients who have these trigger points often report like a localized persistent pain that results in decreased movement and ranging of the muscles affected. It really typically affects the neck, the shoulder, lower back. Specific muscle groups that I tend to see affected are the trapezius or the levator scapulae as well as in the lower back, the quadratus lumborum. But it's important to note that myofascial pain is very reproducible and it does not follow a dermatomal or nerve redistribution. And this really differentiates it from neuropathic type of pain.

In the head and neck region, you may see myofascial pain associated with trigger points that can present as a tension headache or maybe ocular pain or even torticollis. But in the later part of this series we're going to be discussing our recommendations for treatment of mild fascial trigger points in the emergency room.

Christopher Griggs, MD: Yes, and I would say the other thing about myofascial pain is it can happen concurrently with a radiculitis. So, you can have radicular back pain that causes spasm and causes you to have a trigger point or myofascial pain. And also, myofascial pain can radiate over a region. So, sometimes it is difficult to distinguish between that radicular pain and the myofascial pain. But if you were going to do a trigger point injection to treat myofascial pain, you may help some of the pain relief, even if radicular pain is the primary cause because they could have myofascial pain on top of it.

Travis Barlock, MD: Does that mean that you can also just combine strategies for that? Could you do both Gabapentin and do trigger point injections for those types of patients? And would they benefit from that?

Christopher Griggs, MD: I've definitely done that before for lower back pain. I always – and we'll get into this in a little bit – try multiple different strategies, particularly if the therapy I'm giving doesn't have negative side effects in that particular patient. It's worth trying if they haven't achieved pain relief with what they've already tried at home.

Jeremy Driscoll, MD: Alright, great discussion. Now let's move onto approaching back pain in the emergency department. So, I'm going to take you back to a couple of years ago. The American College of Physicians publish really good clinical guidelines that I use for low back pain management that strongly endorses the use of non-pharmacologic treatment options such as superficial heat, massage, acupuncture, and even spinal manipulation. If pharmacologic treatment, though, is needed, they strongly recommend using NSAIDs or muscle relaxers as first line agents. Specifically, with patients with chronic low back pain, we agree with these recommendations to use non-pharmacologic treatment options such as acupuncture, stretching, massage therapy in addition to NSAIDs as first line pharmacologic treatment. But we also agree with the recommendation that opioids should only be considered if the patient has – and I quote directly from this – “failed the aforementioned treatments and only if the potential benefits outweigh the risk for individual patients, and after a discussion of known risks and realistic benefits with patients.”

Christopher Griggs, MD: Yes. I think multimodal strategy for back pain, the vast majority: particularly, the acute back pain, is going to get better with time in our patient population. So, if we can do a multimodal strategy, that doesn't have the risk of opioids that we're all aware of, then something like NSAIDS as a first line along with these other therapies is so key.

Jeremy Driscoll, MD: So, treating back pain, specifically chronic back pain, in the emergency department, at least I think this, is probably one of the most challenging things for providers. Often these patients have tried numerous medications without relief and then they come into your emergency department and they're requesting some additional help.

The goals of treating chronic low back pain often change over time, shifting from the initial intent to cure, to improving pain and function. Patients, I know, often have unrealistic expectations of complete pain relief and full return to their previous level of activity. Therefore, it's really important for us to define goals and expectations with patients in regard to their back pain.

Patients should receive information about effective self-care options, and should really be advised to remain active. Please tell them: do not lay on their back all day resting, because muscles that do not move can eventually become hypersensitive to pain, further exacerbating their pain.

Christopher Griggs, MD: Yes. I think that last point is important as well because exercise, we know, elevates peoples' pain threshold. And if you're not moving, your muscles are going to get tighter. And if you're not exercising, you're not priming your nervous system to be able to deal with the pain. So, people who don't move, they definitely have more pain. And if you allow some sort of musculoskeletal injury or back pain to prevent you from moving, your pain is definitely going to be worse.

Travis Barlock, MD: I often find that that type of counseling is what is forgotten in these patient interactions.

Jeremy Driscoll, MD: I think it also sets you and your fellow colleagues up for better success, setting these expectations, because often these patients are going to bounce back to our emergency rooms.

We're often held to very high standards, carefully balancing patient satisfaction, without providing additional harm by administering opioids for back pain, given the large amount of evidence that does not support the routine use of opioids in the emergency department for back pain.

There's a really great randomized controlled trial that helps support this with the use of non-opioid therapy in chronic back pain, and this is called the SPACE Trial.

Basically, what they did, they took two hundred forty patients with moderate to severe back pain or osteoarthritic hip and knee pain that persisted despite analgesic use. They were randomized to receive either opioids or non-opioid analgesics. They followed up with these patients at about one year after treatment and they found that there was absolutely no difference in pain-related function or pain intensity between opioid and non-opioid groups.

Christopher Griggs, MD: I think every person who has practiced in emergency medicine has dealt with the challenge of that patient coming in with worsening back pain who is on chronic opioids. And their back pain can be very difficult to manage because their brains have been altered over time in terms of the neurochemistry from the chronic opioids that they've been on.

So, I try to teach in our residency that my strategy is if you're on chronic opioids and you come in with an exacerbation of pain, my initial goal is not to escalate your usage of opioids. But I'm also not going to deny you opioids because your brain needs some level of exogenous opioids to feel normal. So, I'm going to give you the dose that you usually take at home, or maybe slightly higher. But try to prioritize giving you an oral dose of opioids over an intravenous dose of opioids because I don't want to train you to need to come to the emergency department for intravenous opioids every time you have an exacerbation of your back pain.

So, if you come in with back pain and you're on ten of Oxycodone every eight hours, I'm going to give you ten of Oxycodone, maybe fifteen, but then I'm also going to hit you with a multimodal therapy that we're going to talk about.

Jeremy Driscoll, MD: Yes, and I think that's really important is that we're not just treating them with a solo opioid agent, if you decide to do that. That we're using other types of pharmacologic and non-pharmacologic treatment in addition to opioids with these patients with chronic back pain.

First, we're going to talk about oral and IV agents that we use for back pain in the emergency department. First is going to be one of your key tools in your arsenal and this is going to be NSAIDs. Aspirin, Ibuprofen, Diclofenac, and these are the most commonly used pharmacologic agents for symptom control in both acute and chronic back pain.

Although some studies favor the use of opioids such as Oxycodone and Morphine over NSAIDs for improving chronic back pain, a meta-analysis found that there's really no statistically significant difference between the groups for either pain relief or functional improvement. Additionally, we feel that the common side effects of opioids such as drowsiness, constipation and nausea, often outweigh some of the benefits for treating patients with these agents in the setting of back pain. The literature supports this as well.

It's important to know, however, that oral NSAIDs are associated with safety risks including GI side effects such as dyspepsia, abdominal pain, gastric ulcers; and then renal insufficiency,

sodium retention, hypertension from this; as well as increased risks of some thrombotic cardiovascular events for non-aspirin agents, and an increased risk of intracerebral hemorrhage as well as other bleeding with aspirin.

These GI side effects we talked about and predisposing risk factors are often why providers discourage the use of NSAIDS or they cannot be used, requiring us to consider other options, both pharmacologically and non-pharmacologically, for treatment of this back pain. But I will say, if there are no contraindications to NSAIDS, these are absolute first line pharmacologic agents that should be initiated in the emergency department.

Christopher Griggs, MD: I just did a review of looking at risk factors for NSAIDS on an article I'm writing. And definitely, when I use NSAIDS, I'm using Ibuprofen because it's readily available and cheap. But there is some evidence that Naprosyn has some lower cardiovascular risk than even Ibuprofen. If a patient has had gastrointestinal side effects in the past, I would probably use Celecoxib as my first line for that patient to reduce the GI side effect risk.

That being said, you might put them on a PPI, but it depends on what the GI side effect is. If it's gastritis, I'm probably going to try the Cox-2 inhibitor. But if they've had a GI bleed or an ulcer, I'm probably going to avoid NSAIDS altogether and decide that it's not the risk. And you have to make those judgement calls in that patient population. But in terms of NSAIDS' efficacy for acute back pain, nociceptive back pain, it's just clear it's the best medication out there.

Jeremy Driscoll, MD: Exactly. Tailor your treatment to your patient. So, next, one of the other more common drugs that I use is Acetaminophen, and this is a very popular over the counter analgesic used for both chronic and acute back pain.

Now, while Ibuprofen and other NSAIDs' primary mechanism of action is to inhibit cyclooxygenases and those affect downstream inflammatory pathways, Acetaminophen actually has limited peripheral anti-inflammatory effects, with its main action acting to modify nociceptive pathways. Acetaminophen has been demonstrated in several studies to provide excellent analgesia either as monotherapy or as an adjunct to other therapies. Specifically, in combination with NSAIDs like Ibuprofen, studies have shown that this multimodal treatment provides faster and longer analgesia in patients with chronic or acute low back pain, with favorable effects on mobility as well as functional ability.

So, now we're going to move on to a little more aggressive therapy here. And that's where most emergency department providers go to next. And this is either Benzodiazepines or muscle relaxers.

Specifically, in patients presenting to the emergency department with back pain, many providers will go straight to Benzodiazepines or other muscle relaxing agents as another treatment modality. But it's important to note there was a study performed by

Freedman et al, that basically, took a randomized, double blinded placebo-controlled study. And they looked at the efficacy of adding Diazepam to an NSAID, which is Naproxen in their study, for the treatment of acute non-traumatic low back pain.

And in this study, they found that the addition of Diazepam failed to show any difference in pain or functional outcome at one week and at three months. So, based on the current evidence and the potential harms of these medications, we do not recommend the routine use of muscle relaxers as monotherapy in the emergency department.

Just like we were talking about with our other options, we want multimodal therapy here. So if you are considering using it with acute or chronic back pain, we really recommend the use of both NSAIDS, Acetaminophen, alongside these agents, if there's no predisposing risk factors.

Christopher Griggs, MD: Yes. I will say that I am very reluctant to use Benzodiazepines. I do not combine Benzodiazepines with opioids in patients that I'm treating for back pain. If I use a Benzodiazepine, I'm going to use it without an opioid. But I tend to use more a muscle relaxer if I feel like there's a patient with muscle spasm that I can't resolve with other multimodal therapies like heat or acupuncture or trigger point injections. But I find some of those other multimodal therapies I'm able to get on top of some of some of that spasm.

Jeremy Driscoll, MD: That's a great point. Moving on, we're delving deeper into the pharmacologic world of treating acute and chronic back pain is one of my favorite modalities and this is Ketamine. In the emergency department, Ketamine is becoming as popular as I think Acetaminophen and Ibuprofen, and it's really a good agent in our opinion, for opioid-sparing therapy in both chronic and acute back pain.

And how Ketamine works, at least partially how it works, is in part an NMDA receptor antagonist and it's really been shown to be both an analgesic as well as a dissociative agent that's really good for analgesia in numerous studies and not just limited to back pain. Ketamine has a pretty safe drug profile and is advantageous when compared to IV opioids, as it doesn't cause respiratory depression, it does not cause hypotension, and has been associated with fewer serious adverse effects. However, Ketamine is associated with some side effects, those most commonly being nausea, vomiting, hypersalivation. We've all seen the emergent phenomena, but those can be easily treated with antiemetics, anti-sialagogues or Benzodiazepines.

Christopher Griggs, MD: I'm curious on your guys experience with using Ketamine. For me, in back pain when I go to Ketamine it's usually that chronic back pain patient that I haven't been able to get on top of their pain with the NSAIDs, Acetaminophen, or they're tried all that and they're coming in and they want to try opioids and this is a great no, let's try something different. Or they've been on opioids and I don't want to escalate their opioids and I'll go to Ketamine. Is that how you guys use it?

Jeremy Driscoll, MD: Yes. It's not like the person who came in from an MVC and strained their back. I'm not immediately going to, "let's give them some Ketamine." This is exactly the patient population I target is the chronic pain who the opioids aren't working, the Acetaminophen's not working, and we've just got to try something different that works a little different that works a little differently. So, this is the same population that at least I give this medication to.

Travis Barlock, MD: The one thing that I'd also like to add about this is just from what I understand, there's a pretty big difference also in the effect of Ketamine on patients with pain depending on the rate at which it's given. So, if you push it quickly compared to if it's given slowly, there's a big difference in terms of the pain response versus the dissociative effect that the patients can experience.

Jeremy Driscoll, MD: Absolutely. Doctor Barlock makes a great point here. When we give it in our protocol at our facility here, it's a short infusion versus a push and this really mitigates a lot of the side effects, specifically the vomiting and emergence phenomena. And our dose that we use here is from 0.15 to 0.3 mg/kg with a maximum of a 35 mg single dose. And this is given usually over about ten minutes and they mix it in about a 50 cc bag of normal saline. And often you can repeat this every thirty minutes for about two to three doses. And from my experience, I've seen good responses.

Christopher Griggs, MD: Yes, and there is some evidence particularly in chronic pain that there may be some lasting effects for days to even weeks. Some chronic pain syndromes are treated with Ketamine infusions weekly. So, I like to think you know, if that patient comes in with chronic pain I give them the expectation, you may get lasting effects from our infusion today that could last for days to weeks and give you more relief.

Jeremy Driscoll, MD: Yes. Just an added benefit of this medication here in your toolbox. So, we've talked about oral and IV agents. We're going to actually move on now to topical agents and this is something I personally have been using much more over the last year or so. And topical application is really just the simplest and least resource-intensive form of regional anesthesia. They're really advantageous because you don't need to get an IV in and/or you can just use this to distinguish: is this cutaneous pain from a deeper MSK injury?

One of the most common ones that I use here and that we use at our facility, are topical NSAIDs, specifically topical Diclofenac. And there's some good evidence that some formulations of topical Diclofenac as well as Ketoprofen Gel are useful in acute pain conditions such as back sprains or strains with a really low number needed to treat values based on a Cochrane Review.

It's thought that the efficacy of topical NSAIDs is likely secondary to a local concentration after application. And while there's no overwhelming evidence, some studies have suggested that topical NSAIDs have lower serious systemic side effects as compared to oral-administered NSAIDs.

So, this might be the population with hey, they have a history of gastritis or dyspepsia. I don't want to give them orals. I think based on the amount of systemic absorption that this may be a reasonable option to try on these patients to see if they do see pain relief, because the harm from this is pretty minimal.

Christopher Griggs, MD: Yes. I think topical NSAIDs – I've also used them in the older population. I would personally go to a topical NSAID if I'm trying to protect the patient who is older and I'm worried about their kidney function, then going to an opioid where you have the fall risk, etc. But older patients, you do get into struggling with pain management because of all the contraindications and side effects and medication interactions. So, it is not an easy population to treat.

Jeremy Driscoll, MD: Definitely. So, the next topical agent that we use here very commonly, to the point that we now stock them in all of our Omnicells here is transdermal Lidocaine. And while we can't cover all topical agents, this is probably the most common one that we use here at our facility. And transdermal Lidocaine patches are really targeted towards peripheral analgesia that works by blocking dermal pain receptors.

There are several different concentrations of transdermal Lidocaine patches. However, the greatest analgesic affect has been seen with the 5% concentration. And this is important because this one is only available by prescription. The lower concentration ones are over the counter. However, if you are sending a patient home with considering this as a treatment modality, give them a prescription for this specific concentration.

Christopher Griggs, MD: Yes. I use 5% Lidocaine in the emergency department, but I will tell the patient if it's going to be more expensive for their pocketbook, to get the 4% over the counter. I don't think there's a huge difference between 4% versus 5% though there haven't been a lot of studies. And there is definitely conflicting evidence on the efficacy of Lidocaine patches in back pain if you look across the literature. But I do think there is compelling evidence in some of the studies that it is great when you use it as an adjunct in multimodal therapy for back pain.

Jeremy Driscoll, MD: Absolutely. So, we talked about all the pharmacologic agents that we mostly use for chronic and acute low back pain. We're going to move on to non-pharmacologic agents now and I think these are really key important components of effective pain management strategy that should not be overlooked by emergency department providers. Specifically, non-pharmacologic treatment modalities are important aspects of treatment of myofascial pain that can be caused by trigger points.

This is really important because we can employ or recommend the use of acupuncture, massage therapy, ultrasonography, transcutaneous electrical nerve stimulation or TENS Units, dry needling, as well as trigger point injections with local anesthetic, saline or steroids.

So, multiple systematic reviews, and then I also found a Cochrane Review, had shown that non-pharmacologic approaches to back pain in the emergency room are effective in reducing pain when compared to actual opioids too.

I found a non-blinded, randomized trial comparing acupuncture to Morphine in three hundred patients with various types of pain, and they found that acupuncture was actually superior to Morphine in terms of pain reduction as well as time to achieve greater than 50% reduction in their pain score.

So, you might be like, how the heck am I going to do this? This is not practical but there have been emergency departments that use acupuncture treatment and it's found actually to be pretty feasible and really did not increase time or length of stay in the emergency department when compared at control groups in a couple of studies.

Christopher Griggs, MD: Yes. I think the biggest challenge for acupuncture is just the learning curve. Putting in the time to learn where to put the needles. But actually, putting a needle in someone's skin, these needles are super small. All the procedures we do involve needles, so it's in our wheelhouse. It's just a matter of figuring out where to put the needle.

Jeremy Driscoll, MD: Exactly. We're well adept to putting needles into places in the body.

Christopher Griggs, MD: But acupuncture is very similar to trigger point injections, correct?

Jeremy Driscoll, MD: Yes.

Christopher Griggs, MD: And you've done trigger point injections in the emergency room?

Jeremy Driscoll, MD: Yes. I actually love doing trigger point injections and I use them all the time now. When I identify someone with myofascial pain in a trigger point, this is just something I also use in addition to pharmacologic therapy orally for treatment of their pain and I've personally seen just great responses from it. This is going to be one of our favorite techniques specifically for myofascial pain.

And what a trigger point is, is a focal area, a skeletal muscle with hyperirritability that causes really significant pain on compression, by either the patient or the provider examining them. They're often found in the big bulk musculature of the back and often a component of actual chronic musculoskeletal pain disorders as well. They may occur solitarily. However, some person might have multiple areas over the back that are actual trigger points. So, when you are examining a patient to identify a trigger point, what you do is you find the area of maximal tenderness. And what you can do is grip the muscle between two fingers, and what you'll often see when you palpate this area is called a twitch response. This is a transient, visible or a palpable contraction or dimpling of the muscle and skin as it tenses up with a muscle fiber

contraction due to the hyperirritability; often referred to as a taut band of the trigger point when pressure is applied.

While trigger point injections can be used to treat other pain syndromes such as fibromyalgia, tension headaches, we recommend this technique to alleviate myofascial pain syndromes that do not respond to other treatment modalities. We must note though that the effectiveness of trigger point injections for treating myofascial pain is still under study.

Christopher Griggs, MD: Great. So, I think that concludes our approaches to back pain. But this is a great look at overall, all the different modalities that are available to you in approaching back pain in the emergency department and really trying to match your modality to the type of pain that you think the patient is suffering from, whether that's nociceptive or neuropathic pain.

Travis Barlock, MD: I personally think that part is probably what's lost the most is just that first breakdown of what is the type of pain that the patient is experiencing in that moment because it really does dictate the treatment modality that follows. So, I think that's a really key point to emphasize.

Jeremy Driscoll, MD: Yes, because if the initial provider misidentified, this patient is not receiving any benefit because they're not being treated with the right strategy for their underlying etiology of their pain.

Christopher Griggs, MD: So, to break it down real quick, Jeremy, for you have a back strain, nociceptive back pain, what's kind of your initial approach for those patients?

Jeremy Driscoll, MD: So, initially when I'm examining them, first define where it is. Make sure obviously, this is not something serious. But let's say it's a young, healthy person that you've identified, have them say if you could point to one spot or tell me where one spot is where it hurts the most, let me know. And if they are able to do that, we might identify a trigger point. If I do identify that, that totally changes what algorithm I'm going down with this patient.

I'm going to be using oral agents, but I'm also going to offer them a trigger point injection to see if that helps. So, I think a good physical exam and history is really important when I first see a patient to identify their type of pain. And also, based on the chronicity of it as well as other risk factors, comorbidities, if they've had prior surgeries, certainly that predisposes them more to a nociceptive type of pain as well as a neuropathic pain. So, you might even be combining two different types of treatment modalities.

Christopher Griggs, MD: Yes, I think if the person comes in with a back strain like you said, I'm looking for trigger points, giving Acetaminophen, giving Ibuprofen, and talking to them about stretching and exercise and all those things. But if it's more of that neuropathic component and they've been on and they've tried the Tylenol and the Ibuprofen, this has been going on for

months, I'm thinking more of do I need to do Gabapentin? Do I need to talk to them kind of about what sort of primary care follow-up do you have if the Gabapentin doesn't work? Do we need to add a muscle relaxer? Is an exercise regimen going to be good for you and do you need to think about outpatient acupuncture? And then if those things aren't working, do we need to do Ketamine in the emergency department to alleviate your pain?

But really, a lot of that chronic pain is setting them up for what is the long-term strategy going to be? Because they're just seeing you for a moment in the emergency department and you have to try to put them on a trajectory of how are we going to figure this out over time because we're probably not going to solve the problem today? Even if I alleviate your pain, it's probably going to come back in a week.

Jeremy Driscoll, MD: Exactly. I couldn't have said it better.