Transcript : Nicolette Ellis NPW 2022

Evaluating The Risks & Benefits of Medicines

Welcome to our session today on evaluating the benefits and risks of medicines.
My name is Nicolette Ellis and I'm a senior clinical pharmacist who specialises in medicines, management, coaching and well-being for those invisible conditions like chronic pain.
Today's session, I hope, will provide some strategies for anyone who's maybe thinking or trialling a particular medication in their care or wanting to evaluate the current medicine regime and their pros and cons. We're also going to look at some common medicines that might be prescribed in chronic pain, such as antidepressants and antiepileptics. Now, the purpose of medicines in chronic pain isn't just about reducing or turning down the volume of the pain experience. We also want to see improvements in the person's function and improvements in their quality of life. Now, unfortunately, medicines are not a silver bullet for chronic pain. I think most of us are aware of this. However, how I like to think about it is similar to this picture. Is that there a piece of the pie in an overall individualised holistic pain management program or self-management program. And we really need to be evaluating how this medicine is improving someone's pain, experience and their condition. Typically, what we see is that if someone does have a benefit from a medication, that they might have potentially a 10 to 50% reduction in their pain experience or they might have an overall improvement in their sleep, their mental health. It could be better improvement of their diabetes management and also improvement in their function. So seeing that their function has increased and hopefully also a reduction in those flare ups and a good flare up management plan. How we measure benefit can be a little bit confusing, and that's because pain itself is quite complex and very individualised. So I can't say for certain that a medication will work in someone's care plan until we've trialed that because pain is an individualised experience and everyone responds differently to different medications.
I would avoid using scales such as this one, the happy or sad face to measure an overall benefit from a medicine or things like measuring. If your pain has reduced from a six out of ten now down to a four out of ten. So these are quite rudimentary evaluation scales and don't really show us the whole picture of the individual, the types of scales that I do recommend, and a more validated scales that look at the individual person and their pain experience. Where I generally start is starting with a goal of therapy and these need to be S.M.A.R.T goals. So specific, measurable, achievable, realistic and timely. An example of this might be if you have a specific goal about improving your sleep quality. Many people who live with chronic pain, their sleep is usually impacted by their pain experience. And so if we do look to improve sleep quality, sometimes we have an improvement in the overall pain experience as well. So a smart goal would look like, 'I want to be able to sleep for a period of 7 to 8 hours per night and reduce the amount of times that I'm waking from pain to no more than 2 to 3 times per night in the next six months.' So that's a really clear goal and we've got

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really good, actionable items that we want to get out of that goal. And one of the most important things is to think about goals as a goal of intent. Most of us have always have established a goal during New Year's Eve, and when we don't achieve that goal, we usually feel a bit deflated and dissatisfied and generally beat ourselves up. So it's important to think about these goals as a goal of intent and in the next 3 to 6 months of trying a few strategies for that goal, you might think, okay, I'm not getting to the place where I want to be and how do we reevaluate these strategies? Or you can see that you've made incremental improvements, however you're going to need a bit longer than the six months to achieve that goal. So once we've achieved or set down what our goal is, the next thing to talk about would be the types of strategies. So that might include medications or it might include "Non-pharmacological strategies" or self-management strategies. So we might try and improve our sleep hygiene and behaviours around our sleep first, and then we might look at adding the medicine if that doesn't quite work for us. So once we've established the strategies that we want to implement from our goal, then we would look at our baseline or measuring our baseline. And I've put a few different types of validated tools that I recommend to use with my clients. So that might be a pain self efficacy questionnaire. So measuring your baseline of pain and how it impacts different aspects of your life, or you might be looking at how you want to improve either your fatigue or your mental health. So we start with that baseline and then implement those strategies for the next 3 to 6 months, and then we might reevaluate every 3 to 6 months to see is that baseline changing and are we achieving or making improvements and incremental improvements to that goal? Before we get into a few of the medications, I always like to explain the different types of pain, and it's really important to understand the types of pain that are out there and maybe the type of pain that you experience. Because it's important to understand those. So we understand where medications fit within that type of pain condition. So some medications are a bit more effective at treating different types of pain than others. There are a few different types of pain. So nociceptive, neuropathic, nociplastic. And then we have mixed pain, which means that someone might be experiencing a combination of those different types of pain conditions. So nociplastic pain is you can think of pain that's associated with tissue injury or damage or even potential damage. So a nociceptor is basically a pain receptor in the body and it's whole deal that it needs to do within the body is to detect pain and send that signal to the brain to process. Types of nociceptive pain include osteoarthritis, pelvic pain, rheumatoid arthritis as some sort of examples of nociceptive type pain. Neuropathic pain, on the other hand, is very different from nociceptive pain. It's when we have damage to the nervous, the nerve tissue, and that might be through a lesion or disease. The best example of this is a condition called diabetic neuropathy. And this occurs when we have high

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blood sugar levels which stop the nutrients from getting to the nerve. So the blood sugar level, the blood sugars actually block the nutrients from getting into the nerve. And so the nerve dies or becomes damaged. And this is a type of neuropathic pain. There's other types like sciatica shingles, trigeminal neuralgia. And some people can experience neuropathic pain from conditions like stroke or multiple sclerosis. Nociplastic pain is pain that arises from changes to the programing of the nervous system, despite no clear reason. And this is because maybe we haven't figured this out yet in the science of nociplastic pain or understanding that pathology. So nociplastic pain is the sensitization of the nervous system and the immune system. And we see that pain signals for some reason become highly amplified in the nervous system. You may have heard of different types of nociplastic pain, so sometimes lower back pain can be nociplastic, and other conditions like fibromyalgia or complex regional pain syndrome. And then to complicate things even more, many people experience that mixed type of pain. So they might have started with, you know, a nociceptive type pain, so osteoarthritis, very common. And then over time, as that chronicity developed with that condition, nociplastic pain such as fibromyalgia they have a secondary pain condition. Now, you might have had your doctor or your pharmacist recommend some types of antidepressants for chronic pain and wondered why this might be particularly, you know, a question that you have if you aren't depressed or anxious. Starting with how antidepressants work for pain. We'll start with the acute pain process. So you might be experiencing acute pain, a tissue damage or injury, and that signal then travels up the spinothalamic tract or the spinal cord and to the brain where the brain 100% processes that pain signal. Now, our brain sort of acts like a pharmacy within our body and the brain after it's processed that signal can decide to release good pain relieving chemicals or hormones called serotonin and or epinephrine. Once the brain has released those they come down to the spinal cord and help to reduce pain signals. When we have chronic pain, however, what's happening to the nervous system and the brain is that the brain is continually supplied with signals saying that I'm in pain. And this sort of overrides the brain and the brain can't keep up with those good pain relieving chemicals. If we took an MRI of someone's brain, we can actually see a chronic pain experience because we see all different areas of the brain that light up.
And if you were taking this slice of the brain from this angle, we have both gray matter and white matter within the brain. And we can see on MRI's that the gray matter has actually reduced in someone who lives with chronic pain. And this is also the area of the brain that produces those good pain relieving chemicals and hormones. This is completely reversible with good self-management and potentially some some medications as well.
And so what antidepressants do is that they actually help the brain improve the ability

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to produce those good pain relieving chemicals, which help to reduce those pain signals overall. So there's many different benefits of antidepressants, and that for chronic pain and it's very individualised, again. So for some it might reduce pain signals, so turn down the pain experience. It might also help to improve sleep regulation, so some of these medications can improve someone's quality of sleep. Some people, it might also improve their mood, particularly if they're having secondary mood changes because of chronic pain. And the good news is that there's efficacy for those types of medications for all of those types of chronic pain conditions that I was talking about, so nociplastic, neuropathic and nociceptive pain. The risks, some people don't find these medications tolerable. And it's important to think about there's lots of different types of antidepressants. You might find one particular class intolerable, but there might be others within that class that are better tolerated as well. So, always good to have a chat with your doctor or your pharmacist about that. Important to know as well, during the first 1 to 2 weeks, I usually find that that's the key time where people are having side effects from the medication and this can just be transient. So they don't quite feel like themselves. But after that two week period of being on the medication, then they feel back to normal. So, important to have a discussion with your GP or pharmacist about when should I expect these side effects to stop and when should I expect to see an improvement overall in my pain management, sleep or mental health? And that's generally a 6 to 8 period when taking those medications. You might have also heard that sometimes we recommend medicines that are used in epilepsy for types of neuropathic pain. And I find these epileptic medicines have been overprescribed and used for non-neuropathic pain conditions like lower back pain, and they've got some mixed evidence but very low quality evidence in conditions like fibromyalgia. So, if you have been taking these medicines for other pain conditions that are not neuropathic and you're wondering if this medication is doing something for your pain experience, it's best to talk to your GP or your pharmacist and discuss whether we should reevaluate the benefits of this medication and see if it's effective for our pain condition. As most of us, I'm sure, would not want to be taking the medication if they didn't need to. Where the medicines or these types of medicines can be very effective at reducing pain signals, improving quality of life and function for types of peripheral neuropathic conditions. So there's a difference between peripheral neuropathic conditions and central neuropathic conditions. Peripheral neuropathic conditions usually happen in these lower limbs like diabetic neuropathy or shingles. Central neuropathy conditions are things like your neuropathies caused by MS, stroke, sciatica. And we find that these antiepileptic medications are most effective for those peripheral neuropathy conditions. So when someone is experiencing

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neuropathic pain on a cellular level of what is happening, as I described before, that the nerve which is damaged is signalling to the next nerve, saying or sending a pain signal and the way that antiepileptic medications work is that they stop or they reduce the signal transmission from nerve to nerve to say that I'm in pain. So really what they're doing is reducing down that hyperactivity of that damaged nerve to say that I'm in pain. For many individuals these medications won't be tolerated. So about 50% of people who are taking these medications will experience some sort of side effect. And that might be on a spectrum of, you know, a transient sort of side effect that I was talking about before. So a lot of individuals feel sedated the next day when they're taking these medications. And that might only last for a couple of a couple of weeks, 1 to 2 weeks, and then they're used to the medication. However, some other people might find that it's affecting the way their memory or also even causing weight gain. Others, they might experience swelling of the ankle, so peripheral edema, and particularly for something like diabetic neuropathy, that's not really a side effect that you want when you're trying to better manage your chronic pain condition. When you're thinking about types of medications that you can use for your chronic pain or maybe other conditions, I'd always recommend trying to employ a communication model with your GP or your pharmacist called the B.R.A.N model. So this is looking at the benefits, risks, alternatives or nothing. For example, if we're looking at a type of medicine that we want to trial, we might talk about the benefits first of that medication. So I might have an improvement in my pain experience or my sleep and what's the risks of those medications? So every medication has a side effect, and I need to be really well informed about what those risks are. First and foremost, I might also want to know one of my alternatives. So is there an alternative medication to this or is there an alternative self-management strategy or something else that I should be doing with another health professional, like a psychologist, a dietitian, or even an exercise physiologist? And then the last one, which is what if I don't do anything at all? So what if I don't change my current pain management plan and continue, and potentially time is what I need at the moment, rather than adding in another thing to my pain management plan? And that's a really important question to be asking ourselves. And I love to use this model whenever discussing any type of treatment, and particularly things like surgery, medicines or your overall management plan with with your healthcare providers. I have a number of tips for the use of medications. Before starting any medication, make sure you discuss that B.R.A.N model with either your GP or your pharmacist and get a better understanding of really what are my alternatives, what other strategies can we be using before we're starting a medicine, or is this the right medicine for me? So being fully informed. Always start with a goal of therapy if you're building any strategies for your pain management, and then we want to measure it with those validated tools that we discussed

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earlier in the session. Really important to start with one medication at a time, preferably at a low dose, so you can get used to those maybe transient side effects for the first few weeks and monitor those side effects as you go. So some might be short lived and then others might mean that that medication is not for you. And I'd always recommend that you contact your GP or your pharmacist before ceasing that medication, unless it's a really intolerable side effect. If you're starting something like an antidepressant or antiepileptic for chronic pain, be mindful that it can take up to 6 to 8 weeks for us to know if that's going to be a beneficial medication for yourself. Once the medication is being taken for a period of time. So you might go and reevaluate that medication in three months, make sure you review your baseline. So if you took the pain self efficacy questionnaire is reviewing that in another three months to see if we're improving that baseline measurement. And again, please don't stop any medicines abruptly. Always discuss that with your healthcare team because some medications, unfortunately we need to taper over a period of time to make sure that you're safe and you're not experiencing any withdrawals. And my last tip and trick is to look at where, you know, what do I do if I don't know where to start? You might be on several types of medications and you want a full medication review, holistic of you. So there is a service called a Home Medicine Review. It requires a referral from your GP and this QR code will actually find you a specially qualified pharmacist in your local region. If you want to find someone who's local to you. Pharmacists can also apply to do these via telehealth if you're in a rural and regional area. And what will happen is that you will be provided with a full comprehensive medicines review that usually takes about an hour. The pharmacist will also prepare a report for yourself and the GP and then they can review those strategies or recommendations that they provided to that GP over a period of time. So, really wonderful service and it's federally funded and fully subsidised. Well, I hope you enjoyed today's session on medicines and evaluating the risks and benefits. Thank you.