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Medical Cannabis for Pain May Reduce Need for Opioids

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ANAHEIM, California — The use of appropriate dosing of medical cannabis and following key treatment regimen recommendations can lead to "remarkable" improvements in pain and a reduced need for opioids in both adults and children, two pain specialists suggest.

Describing his experience in treating pain with medical cannabis over the past 4 to 5 years, Mark S Wallace, MD, professor of clinical anesthesiology at the University of California, San Diego, said he starts with some basic criteria, including that patients have not responded to efforts for pain relief with standard therapy.

"Our approach in recommending medical cannabis for pain is that patients have failed to respond to conservative therapies first. However, this should be considered before chronic opioids," Wallace said during a presentation here at the American Pain Society (APS) 2018 meeting.

If patients are already being treated with opioids, Wallace asks them to taper or at least start to taper from the drugs before starting medical cannabis. "I tell patients, 'You can use the cannabis or the opioid, but I can't allow you to do both'."

In the more controversial topic of using the substance to treat children, Elliot J. Krane, MD, chief of pediatric pain management at Stanford Children's Health, California, acknowledged the concerns, saying he only does so "cautiously."

Still, he told meeting attendees that the decision to try the cannabinoid cannabidiol (CBD) in these patients wasn't hard, considering the alternatives.

"I just got tired of having to give these kids opioids or ketamine," said Krane, adding that treatment with CBD has substantially improved pain in his young patients.

Dosing Complexities

In his presentation, Wallace noted that if his adult patients make it halfway through tapering from their opioids and are adherent, but begin to have significant increases in pain and reductions in quality of life, he will consider allowing an earlier introduction of cannabis.

In those cases, "I will let them introduce cannabis," he said. "And what I've seen is some patients will get to as much as an 80% reduction in their opioids with cannabis. I look at that as a success and will let them continue on cannabis as long as they can keep the opioid use down."

Among key considerations and challenges is proper dosing. The cannabinoid tetrahydrocannabinol (THC), which is the principal psychoactive component in cannabis, can have analgesic and anxiolytic effects at low doses (2 to 5 mg), while higher does are linked to paranoia (10 to 15 mg) or even psychosis (20 to 25 mg).

On the other hand, CBD does not have a psychoactive component and is associated with more medicinal effects, ranging from "alertness" at 15 mg to increased sleep (160 mg) or acting as an anxiolytic (3 to 400 mg) or antipsychotic (>400 mg).

The balance of those components in medical cannabis available at dispensaries, however, is commonly far from ideal, Wallace noted.

"I will ask patients if they've tried medical cannabis and it's not unusual for them to say, 'Yes, I tried it and hated it and won't try it again'," he said.

"I will then ask if they received any guidance on dosing, and they will say, 'No, I just got a card and went to the dispensary and got some highly concentrated THC that only made things worse'." In such cases, Wallace has them start over at very low doses and slowly titrate up.

Role for Naturopaths?

However, with dosing so complicated, he recommends the use of a naturopath.

"Most professionals don't know how to do it, and while I do, I don't have the time. So I refer patients out to a doctor of naturopathic medicine who can sit down with the patient and give them dosing guidelines that they will then share with me," he said.

Wallace added that while delivery methods, such as ingestion, topical, and sublingual, can suit different circumstances, he prefers vaporization of the leaf instead of combustion (smoking).

"We think the safest route is to vaporize the leaf because it doesn't combust the leaf. But it increases the temperature enough to release the cannabinoids and some of the terpenes (another cannabis component)," he told meeting attendees.

Wallace told *Medscape Medical News* he had concerns about vaporizing extracts.

"I am only concerned…due to uncertainty on extraction process and contaminants," he said. "Sublingual is fine and we use it a lot."

A key difference in the types of delivery is in the duration of the effect. The shortest effect is associated with vaporizing or smoking cannabis, and the longest is in ingested forms. With effects for the latter lasting up to 8 hours, Wallace said many patients use those formulations at night.

Driving Considerations

The differences in duration of effects are also important in recommendations on driving. General rules are that after ingestion, driving should be forbidden for 8 hours; with transmucosal formulations, driving should be forbidden for 4 hours; and with inhalation, the limitation should be 2 hours, said Wallace.

"It's important to tell patients that there is very little research so far on driving while under the influence of cannabis," he noted. "We know that it appears to have much less of an effect on motor skills than alcohol. However, the combination of alcohol and cannabis can result in severe impairment."

With more than 19,000 deaths per year attributed to prescription opioids, an important benefit of medical cannabis is that there is no apparent lethal dose.

And in terms of its role as a replacement for opioids, Wallace said he sees the shift all the time. However, a key factor is patient motivation.

"I am about 70% successful in completely weaning patient off of opioids and switching to cannabis in willing and motivated patients," he said.

"Most of the remaining patients are able to considerably wean down on their opioid dose with the cannabis, [but] for a few, it does not work."

Treatment in Children

In the second presentation, Krane described his experiences in using this type of treatment in 39 pediatric patients.

He noted that he favors treating only with CBD, which conveys no psychoactive effects, as opposed to medical cannabis. And he prohibits patients from smoking or vaping because of concerns about health effects.

"I think it's crazy to use the full plant when you can just give a substance," said Krane, who is also a professor in the Departments of Pediatrics & Anesthesiology, Perioperative and Pain Management at Stanford University.

For delivery in pediatric patients, Krane recommends tinctures, which can be administered orally and are absorbed within seconds. And in terms of specific CBD doses for pediatric pain, Krane told *Medscape Medical News* that he starts very low.

"Expressed on a mg/kg basis, I start at 0.02 to 0.05 mg/kg and titrate to an effective dose, to a maximum of 1 mg/kg. Most dispensaries will carry tinctures," he added.

Krane said he does not recommend the involvement of naturopaths for dosing of pediatric patients, as Wallace recommends for adults.

"I'd rather not send children to naturopaths. Few, if any, have pediatrics expertise," he said. "And they will try to sell a variety of other herbal and naturopathic remedies to my patients, of which I would not approve."

"Transformative" Results

Krane described several cases of patients with pain conditions, including a teenager with fibromyalgia, a 16-year-old with recurrent oral ulcerations relating to a *STAT-1* mutation, and a 7-year-old patient with epidermolysis bullosa, a blistering skin disease.

He noted that treatment with CBD allowed for substantial improvements in pain. The patient with oral ulcerations, for instance, went from hospitalizations every 6 weeks for hydration and hydromorphone as patient-controlled analgesia to no hospitalizations or opioids in the 2 years since CBD initiation.

"CBD has kept my daughter out of the hospital," the patient's parent wrote. Comments from other parents prompted by improvements included that the treatment was "life-changing" and "CBD was transformative."

Krane acknowledged the numerous concerns about cannabis compounds in children, even if just CBD. This includes that the compounds have no US Food and Drug Administration oversight and that there is no authenticating of the source, purity, or potency.

"It's a problem and I tell parents all of this, as is required," he said. "It's also a problem with many substances that we routinely ingest."

He then shared a conversation in which a colleague expressed concerns about cannabis components in children, including everything from how long the drug effect would last to what the effects would be and whether there would be liver toxicity.

"My response was this: When you started giving oxycodone to patients, did you know the answers to those questions? No. When you started treatment with gabapentin or duloxetine? No," he said.

"The point is we don't know that much less about CBD than a lot of things we are using. I am comfortable with it because in a lot of cases, if everything else has failed, the choices are either opioids or CBD. And I would rather recommend CBD than opioids."

Krane noted that a formal analysis is underway at his center to document the clinical results of patients being treated with CBD.

Meanwhile, while there are no medical guidelines in the recommendation of medical cannabis, the Medical Board of California has issued its own "Guidelines for the Recommendation of Cannabis for Medical Purposes."

Wallace reported consulting relationships with Insys and Zynerba. Krane has disclosed no relevant financial relationships.

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