Caring for the Patient Who Uses Cannabinoids

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***CANNABIS* USE IS** permitted in many states across the United States, while simultaneously being the most widely used illicit drug.[1] With the increased use of *Cannabis* for both recreational and therapeutic indications, the perianesthesia nurse should be aware of how the drug works and the implications for patient assessment, monitoring, and health teaching. Screening for *Cannabis* use can help anticipate unpredictable responses to analgesics and other medications. In all phases of perianesthesia care, we can anticipate caring for patients who use cannabinoids more frequently. Keeping up to date with these trends empowers nurses with knowledge that helps us provide safe care and advocate for our patients.

What is Cannabis*?*

Cannabis (marijuana) is one of the oldest documented medications in history and one of the most popular street drugs today.[1] Its history dates back to 2737 BC.[2] It is derived from the *Cannabis* plant and contains more than 500 chemical compounds.[1] Many of these compounds are cannabinoids, which interact with the receptors in the endocannabinoid system.[2] The main cannabinoids are cannabinol, cannabidiol, and delta-9-tetrahydrocannabinol (THC).[1] The compound most associated with the psychoactive and euphoric effects of *Cannabis* is THC.[2] The varying levels of these three cannabinoids create different strains and potencies for the user.[2]

Cannabinoids activate the cannabinoid receptors CB1 and CB2. The CB1 receptors are found mainly in the central nervous system, providing pain relief, muscle relaxation, and antiemetic effects, whereas the CB2 receptors are found largely in the peripheral tissues. CB2 receptors are known to have anti-inflammatory and immune responses.[2] The perianesthesia nurse may need to provide care for patients who have become accustomed to regular use of *Cannabis* and the benefits these drugs provide. However, the nurse should be mindful that *Cannabis* use does not confirm the presence of abuse or addiction. Instead an objective, nonjudgmental approach should be used to gather a health history that includes the use of commonly used drugs such as alcohol, tobacco, and *Cannabis.*

Medically Prescribed Cannabis

There is a growing patient population turning to cannabinoids as a treatment option or adjunct to manage medical issues. Although it is not recommended to treat acute pain, some common indications include chronic pain syndrome, neuropathic pain, anorexia and cachexia, epilepsy, posttraumatic stress disorder, insomnia, headaches, inflammatory bowel disease, glaucoma, multiple sclerosis, and Parkinson's disease.[3] The list of therapeutic uses is anticipated to grow, reinforcing the importance for nurses to be aware of misconceptions and stigmas that can be harmful to a therapeutic nurse-patient relationship.

Implications to Postanesthesia Care

Cannabis can have profound effects on the thermoregulatory processes. This is evident by the increased incidence and severity of shivering, secondary to perioperative hypothermia.[4] It is postulated that regular users of *Cannabis* may have greater postoperative hypothermia and shivering due to the antinociceptive effects of THC on the pathways involved with pain and temperature sensation.[4] Although shivering may only be a minor annoyance for most patients, hypothermia

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can place increased physiological demands on the patient and lead to negative cardiovascular sequelae. Tachycardia, hypoxia, cardiac arrhythmias, and even myocardial infarct can be triggered in vulnerable patients.[4] With knowledge of this risk, the perianesthesia nurse can implement strategies in a proactive manner, such as use of a warming blanket during the Phase one recovery period.

Identifying *Cannabis* Users in a Nonthreatening Manner

In many states, *Cannabis* is a strictly illegal substance. It is not surprising that some patients are not forthcoming in sharing information about their usage. Even if they have a documented medical need for *Cannabis*, patients may be reluctant to share this with the anesthesia provider or perianesthesia nurse due to concerns of a negative stigma or perception by the health care team. In these cases, the standard question "do you use drugs for recreational or other use," may receive a "no" in the check box.

To encourage patients to be transparent, it may be helpful to outline the rational of inquiring about *Cannabis* use. We can reassure the patient that collecting this information helps ensure they are monitored for complications that can occur more frequently in *Cannabis* users, and that they receive the appropriate dosage of analgesic medications. Some potential concerns include a cross-tolerance to opioids, unpredictable response to medications, profound postoperative shivering and related increased metabolic demands, postextubation hypertension, tachycardia, and upper airway distress.[1,5] Individuals who intake *Cannabis* by smoking the product (vs vaporizing or oral dosing) may also have a higher occurrence of stridor, airway distress, and postoperative laryngeal edema. This may be due to the presence of irritants found in *Cannabis* smoke, such as carbon monoxide.[1] Having an accurate understanding of the patient's preoperative *Cannabis* use will help to optimize pain management and manage unexpected fluctuations in vital signs related to pain, shivering, or airway irritation.

Discharge Teaching

Although the patient may report benefits from routine use of *Cannabis*, immediate use of this product after a surgical procedure is not without risk. By being aware of the patient's preoperative usage, the nurse can reinforce the risks of combining *Cannabis* with prescribed pain medications. Common adverse effects that occur with *Cannabis* use are somnolence, dizziness, disorientation, and impairment of psychomotor skills, short-term memory, and judgment.[6] These may lead to issues such as increased falls risk, oversedation, loss of recall of health teaching instructions, and accidents that cause harm to the patient or others (such as driving while impaired). One can see the serious risks of using *Cannabis* after discharge, particularly if combined with prescribed opioids. The physician may prescribe a reduced dose postoperatively, as appropriate for the patient, or put cannabinoids entirely on hold to achieve a balance of patient safety and comfort. For example, the patient who uses cannabinoids daily for fibromyalgia or a seizure disorder may have been instructed to reduce their *Cannabis* to a specific dose, versus the recreational user being advised to omit *Cannabis* use entirely until seen at a follow-up appointment with the physician.

Overall, the understanding of the endocannabinoid system and the physiological benefits of stimulating the cannabinoid receptors continue to be an area of interest, with need for further clinical studies.[1,3] Although it is a complex and controversial topic, we can support the safety of our patients by taking time to learn and have a working knowledge of the endocannabinoid system, its receptors and the implications of *Cannabis* therapy on perianesthesia care. This knowledge will help nurses to continue to act as advocates for our patients.

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