Medical Marijuana in Pediatric Oncology: What Your Patients Are Thinking

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MM Medical Marijuana

AYA Adolescent/young adult

THC Tetrahydrocannabinol

Use of complementary therapies occurs by up to 40-80% of pediatric oncology patients.[1,2] Although cannabis is hardly new to the scene as a complementary treatment, legalization of both medical and recreational marijuana in many states has made these products ubiquitous. Use of and interest in medical marijuana (MM) by hospitalized pediatric patients appears to be concentrated in oncology units for the purpose of relieving symptoms such as nausea, pain, and anorexia.[3] Yet clinical practitioners are still limited by the absence of high-quality research in MM to guide them. FDA approval of Epidiolex for specific pediatric epilepsy syndromes was an important research milestone, but marijuana remains classified as a Drug Enforcement Administration Schedule I drug, imposing an enormous barrier for clinical researchers.

So how should pediatric oncology programs approach the topic of MM? In this issue of *Pediatric Blood and Cancer* , Ananth and colleagues used a qualitative research design to characterize patient and family perception of MM from a single institution in a state with permissive rules towards both medical and recreational marijuana. The authors interviewed both parents of younger children as well as adolescent/young

adult (AYA) patients. In this cohort of pediatric oncology patients/families, although the proportion of subjects using MM was only 27%, a higher proportion were interested in MM, though with concerns about safety and effectiveness.

In the Ananth study, patients/families were primarily using or interested in MM for treatment of nausea, anorexia, and anxiety. A concerning number of families in this study expressed a hope that MM would be effective as anti-cancer therapy. With the absence of high-quality randomized controlled trials of MM for treatment of cancer or treatment-related symptoms in children to inform practitioners on safety, dosing, and toxicity, there is no evidence base for pediatric oncologists to base a recommendation of MM. But should we be dissuading interested families from using MM products because they are harmful?

Regarding safety of MM use, most parents and nearly all AYA patients minimized risks. When expressed, safety concerns of MM were perceived as less than with alcohol, illicit drugs, or other prescribed medications. This is not surprising, as perceived risk of marijuana in AYA has been steadily failing over last five years in the National Survey on Drug Use and Health.[4] Understandably, in this study safety concerns focused on the potential for addiction, which would be associated with MM products enriched in Tetrahydrocannabinol (THC), the principal psychoactive cannabinoid found in cannabis. However, cannabis is a complex plant with over 70 distinct cannabinoids, and the MM industry now contains a broad range of different types of products that have varying concentrations of THC and consequent psychoactive potential. Carver and colleagues noted in their study of 19 hospitalized patients actively using MM, the majority were using products enriched in Cannabidiol with low concentration of THC. One limitation of the study by Ananth, et al. is that there was no attempt to classify the type of MM either being actively used or of interest to patients and parents, so the appropriateness of the concern for addiction cannot be assessed. Absent in patients/families' perception of risk was any potential for interaction with chemotherapeutics or other prescribed medications. Since both THC and Cannabidiol can impact drug bioactivation and metabolism through multiple pathways, this potential safety concern should be known to the patient and treatment team.

Despite the high level of interest in MM in their study population, the minority of patients/families had discussed MM with their oncologist and in those cases, the patient/family initiated the conversation. Absent advice from their treatment team, there was reliance on friends, family, and the internet for more information. A majority of parents desired the involvement of their physician team in any consideration of MM, and previous research has shown a high level of willingness amongst pediatric oncology providers to consider MM use by their patients, particularly when patients are seriously ill, so what stands in the way of talking about it? Providers are concerned about the absence of good research and are less knowledgeable in the domain of rules/laws regulating access to MM, particularly at the state level where there has been so much change over the last decade.[5] These gaps may explain why we don't bring up the topic of MM with our patients and families as often as they would like.

Institutions may consider designating a multidisciplinary team of providers to develop greater experience in the legal and pharmacologic aspects of MM use. This team can support providers in the shared decision-making process around MM. In some institutions, it may make sense to house this expertise within the pediatric palliative care program supporting oncology patients.

In summary, MM presently is an important part of the complementary therapeutic options available to pediatric oncology patients and their families, who desire the involvement of their provider team in decision making around MM. Despite the lack of evidence supporting use of MM, many patients are using MM products or may in the future, so we should invite this discussion as this will strengthen our therapeutic partnership.

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