The Current Status of Medical Marijuana in the United States

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Abstract

Medical marijuana is currently a controversial issue in medicine. There are strong pro and con opinions but relatively little scientific data on which to base medical decisions. The unfortunate scheduling of marijuana in class I has limited research and only serves to fuel the controversy.

This article will review the history of laws to regulate drugs in the United States in the 20th century to provide context for the current status of medical marijuana.

It will include the rationale for opposing medical marijuana laws and the problem of the Schedule I inclusion of marijuana as well as other drugs. It will examine the problems associated with smoking raw marijuana and review other routes of administration.

Finally, it examines the inadvisability of medicine's promotion of smoked marijuana.

Introduction

The regulation of mind-altering drugs in the United States has been steadily expanding since the early 20th century. It is necessary to briefly review this history in order to place in context the current status of marijuana, and medical marijuana in particular.

The 20th century saw several laws designed to restrict specific classes of drugs from unregulated use in the United States.

In 1909, the first law specifically banning a substance was passed to outlaw opium smoking.[1] The only groups in the United States smoking opium on a routine basis were Chinese immigrants, mostly in San Francisco and in other West Coast locations. This law had strong racial overtones. The United States did not want Chinese immigration and there was popular support to contain such immigration.

The Harrison Narcotics Act, passed by Congress in 1914, was a broader based ban. It specifically regulated a class of drugs, the opiates, from being grown or distributed. Opiates could then only be prescribed by physicians. The prior over-the-counter purchase of opiate products, mostly morphine, was banned.[1] Interestingly, cocaine was included under the Act even though it was not an opiate.

The 18th amendment to the Constitution, the Volstead Act, banning the sale, production and transportation of alcohol in the United States, was passed in 1919. "Prohibition," coordinated by the Anti- Saloon League, became the law of the land.[1,2]

Widespread smuggling of alcohol from Canada, the Caribbean, Mexico, and South America made the ban impractical. The failure of this law to limit alcohol's negative impact on society, the continued availability of alcohol, and the law's unpopularity led to the repeal of prohibition in December 1933 with the ratification of the 21st amendment to the Constitution.[3]

Heroin, an opiate that was regulated in the Harrison Narcotic Act, was specifically prohibited for use in the United States by another law in 1924.[1]

The Marijuana Tax Act was passed in 1937. This act made it illegal to grow or distribute marijuana unless the grower obtained a federal stamp. However, stamps were unavailable as there was no application process. Marijuana was therefore effectively outlawed by the necessary stamp being made unavailable.[1]

The Controlled Substances Act of 1970 placed a number of mind-altering agents in Schedule I as they became available, including marijuana, Lyseric Acid Diethylamide (LSD), Gamma-Hydroxybutyrate (GHB), and now the various mephadrones in "bath salts."[4]

These legislative actions have led to the gradual criminalization of an increasing percentage of American citizens, who continue to use the banned substances despite the laws passed to make them illegal. Accordingly, the country saw increased incarceration of nonviolent offenders, including both addicts and dealers, for drug-related offenses. The top dealers were rarely affected, as they were protected by many layers of internal drug trafficking bureaucracy. This has resulted in a greater percentage of the US population being incarcerated than any other country, creating enormous expense to taxpayers while having little effect on the use of or addiction to banned substances. The United States has 5% of the world's population but 25% of the world's incarcerated individuals.[5]

Looking back at laws passed here and elsewhere to control drug use, one can reasonably conclude that they have been ineffective.

Marijuana in the Vietnam War

Prior to regulation, marijuana was primarily used by small groups of people in the United States. Prior to the Controlled Substances Act of 1970, there was a marked increase in marijuana use during the '60's counterculture. These included "hippies" in the mid-1960s, college students, and faculty, and protesters in the antiwar movement.

There was a similar increase in marijuana use among military personnel serving in Southeast Asia throughout the Vietnam War. This use of marijuana, and later heroin, alarmed base commanders and eventually led to action by the Nixon administration and the passage of the Controlled Substances Act.[4] Military authorities established detoxification facilities in Saigon and a program of drug urinalysis testing began in 1971 to identify persons using marijuana or other drugs.

An early attempt at identifying drugs in the urine, the unreliable free radical assay technique or FRAT test, included many false positives and incorrectly labeled many nonusers as drug users if they tested positive.

During the Vietnam War, I served as a psychiatrist at a US Air Force (USAF) Base in Thailand. Those who tested positive on the FRAT test were strapped to a stretcher and shipped to Saigon for detoxification. This sometimes led to the embarrassing misidentification and labeling as addicts service men

and women who had never used any drugs but turned up false positive on this test (personal experience, Chief Psychiatry, 11th USAF Hospital, U-Tapao Thailand 1970-71).

Marijuana use, however, has been widespread by many groups from the 1970s onward.

Medical Use of Marijuana

Marijuana was used as a medicinal for thousands of years and perhaps longer. The earliest written reports of marijuana use come from Chinese writings in the 27th century BC.

Until the early 1940s in the United States, marijuana was found in more than 20 medications for a variety of ailments. It continued to be included in the US Pharmacopoeia, the predecessor of the Physician's Desk Reference, five years after the Marijuana Stamp Act was passed.

Prior medical use of marijuana was restricted to extracts of the cannabis plant combined with various other ingredients and sold in a variety of patent medicines advertised and marketed as cure-alls. None of these "medicines" were smoked.

In states where medical marijuana is currently available, it is almost exclusively sold in drug emporiums in a raw state meant to be smoked. In Hawai'i, individuals with medical marijuana cards were initially allowed to cultivate three plants for personal use; this later increased to seven plants.

The vast majority of medical marijuana users claim chronic pain and smoke the raw plant. (A small group use marinol, a legal medical form of tetrahydocannibol, prescribed in a 5mg tablet, which has a little or no euphoric properties.)

The scheduling by the Drug Enforcement Agency of marijuana and other drugs (heroin, Lysergic Acid Diethylamide, Gamma-Hydroxybutyrate, and various mephadrones in "bath salts") automatically eliminates valid research on the drugs, which is never a good idea from an academic, research, or public policy perspective.

Marijuana should be removed from Schedule I. This would allow research to determine possible medical applications of marijuana extracts and develop acceptable delivery methods other than smoking the raw plant.

In Hawai'i, the Hawai'i Medical Association (HMA) took a stance against the first medical marijuana bill passed in 2000. One main sticking point is that medical marijuana would need to be provided in a non-smoking form in order to have support from the medical profession. Authorizing use by inhalation of a drug with an unknown number of co-drugs contained in the same raw form is not supportable.

The United States has experienced a century of terrible adverse medical consequences of cigarette smoking and nicotine addiction. Over 400,000 lives lost each year are directly and indirectly attributable to the adverse effects of smoking cigarettes. We endured as a nation, and as a medical profession, the falsification of data from the US tobacco industry regarding the problems of nicotine use and, specifically, the problems related to chronic inhalation of a raw drug which contained nicotine and multiple other identified tars and carcinogens. How can physicians or medical associations support any medical marijuana law that involves smoking an unrefined drug after this experience with cigarette smoking?

Marijuana's ingredients are available in a pill form. The approval of Marinol, a non mind-altering form of delta 9 tetrahydrocannabinol for general use, is a case in point. This is a marijuana extract that has been available by physician prescription for use for a variety of anecdotally acceptable treatments, especially the nausea associated with chemotherapy, anorexia associated with HIV infection, and some reported forms of pain relief. Other ingredients from the cannabis plant have been isolated and found to be anecdotally useful in treating certain childhood seizure disorders.

Supporting the use of medical marijuana by inhalation solely because users prefer it would be akin to supporting the inhalation of any other drug meant to be taken by mouth. Addicts in our treatment program often crumble pills and nasally inhale or inject them intravenously to obtain a faster high. We would never say, "OK, go ahead and inject yourself if that's what you prefer."

The primary reason for medical marijuana use is control of chronic pain. Medical users descriptions of chronic pain are often vague and may relate to some distant injury or surgery to rationalize the need for a marijuana card in Hawai'i.

Some practicing physicians in Hawai'i who formerly prescribed the marijuana card have ceased doing so (anonymous, personal communication). A few physicians travel within the state for the purpose of writing marijuana prescriptions. Many neither examine the patient nor take a detailed history.

Marijuana card holders who seek addiction treatment in our program for marijuana dependence indicate that at the time of prescription, they in fact had very little pain. They told the prescribing physician what was necessary to obtain a medical card. They also report minimal history taking or physical examination by the physician. Rarely were they required to show some evidence that indicated pathology. It is difficult to support that approach to prescribing any medication.

Most pain medicine specialists emphasize the importance of understanding the pathophysiology, severity, and origin of the patient's pain which correlate with the stated symptoms. While pain is subjective and some are more tolerant to chronic pain than others, an approach to pain management needs to be based on the body's ability to heal, as well as the pathophysiological understanding of its etiology. Our bodies usually heal rapidly from surgery and most forms of trauma.[6]

Opiate prescribing practices of individual physicians are being scrutinized. There is obvious over prescribing of opiates by some physicians and there are opiate-prescribing mills operating as legitimate pain management clinics. State and federal efforts are underway to close these prescription mills which are legalized drug-dealing businesses. In some cases, unscrupulous physicians are doing the same thing in their individual practices.

Continuing medical education training on analysis of chronic pain, pathophysiology, and severity are being provided to educate physicians on evidence based methods of treating chronic pain. The same approach needs to be applied to medical marijuana.

There is no current rationale to support that prescribing marijuana would be preferable to other approaches to pain management. Unfortunately, medical marijuana laws are passed as a means to bypass the illegality of marijuana. Medicine has often been an unwilling participant in this process.

Marijuana as an Addicting Drug

It is an erroneous belief widely held by the general public, and among many physicians, that marijuana is not addicting. Marijuana is a powerful mind-altering drug which impacts the addiction circuitry in the brain in a manner similar to all other mind-altering addicting drugs.[7-10] Our patients seeking help with marijuana addiction see it as an addicting drug that is harming their lives and they are unable to stop its use.

Marijuana addiction has been difficult to treat in our experience. Patients can experience lengthy periods of withdrawal and describe withdrawal symptoms that can continue for months after cessation of use.[7,10-15]

Many have been using marijuana for decades and don't realize their degree of the dependence until they try to stop. Because their marijuana use played such an important part in maintaining homeostasis in their lives, a feeling of emptiness and alienation often accompanies cessation of the drug.

Researchers have found that non-addicted volunteers who were administered high-dose marijuana over a several week period demonstrated significant drug withdrawal symptoms on abrupt cessation of the drug. The symptoms show striking similarities to the general sedative-hypnotic withdrawal syndrome. They describe anxiety, agitation, tremulousness, elevation of vital signs, insomnia, and irritability as various components of marijuana withdrawal.[13,15,16] These are similar withdrawal symptoms seen with any of the sedative-hypnotic drugs, including alcohol, benzodiazepines, barbiturates, and most hypnotic agents. While it is not typical to observe such severe withdrawal in usual marijuana subjects, the severity of marijuana withdrawal matches dosage, use pattern, and length of addiction.

By comparison, heavy alcohol users also may not experience severe withdrawal symptoms on cessation of the drug, but those who consume a liter of spirits per day or its equivalent in wine or beer can have severe withdrawal effects that include seizures and delirium tremens. Neither seizures nor delirium tremens have been described with marijuana withdrawal.

We might argue over why our nation has chosen to legitimize the use of alcohol, nicotine, and caffeine, despite their well-known detrimental effects. I suspect it is more likely due to long-term social mores and customs than on research on potentially harmful effects.

Nicotine addiction and the terrible consequences evidenced in the high death rate from cigarette smoking in the 20th century are well known and continue into the 21st century. The medical profession does not support or promote the heavy use of any legal or illegal drugs. Decriminalization and/or legalization of marijuana use is a state and federal issue. Legalization under the guise of medical necessity is wrong in my opinion and should not be supported by the medical profession.

We don't have accurate studies on driving impairment caused by marijuana intoxication or chronic marijuana use.[17] Marijuana card users may feel that their driving ability is not impaired, but I doubt that they are accurate observers of their level of impairment. Nor are drivers impaired by alcohol.

Summary

Rigorous scientific research is needed before marijuana can be approved for the treatment of chronic pain or any other conditions. It would also be important for the government to remove marijuana from Schedule I to allow the research that would quickly follow. Until that research is done, stating that marijuana is useful for treating chronic pain, anxiety, post-traumatic stress disorder, depression, and other health conditions remains anecdotal and conjectural.

Anecdotal findings in medicine are not usually accepted, though they may serve as the basis for more extensive research on a topic. The randomized trials cited also refer to smoked marijuana. The number of "hits" to achieve pain relief is also described. How would legitimate research determine any effects based on "number of hits" of smoked marijuana? The research from those countries without scheduling problems: United Kingdom, Germany, Canada, Australia, other European and Latin American countries.[18-24]

Self-serving claims by medical marijuana users should not be used to base medically unsound conclusions.[25] If this is allowed, the medical profession loses creditability.

The national debate on marijuana as well as other drugs must continue so that we can all examine the basis for our laws, if we are to support any needed changes in them.

To date the "war on drugs" war has shown few visible results in stopping the promotion, distribution, or use of currently illegal drugs in the United States.

Our drug control laws show the fallacy of crafting legislation for a poorly understood national problem. We tolerate laws that made little sense 300 years ago, when attempts at legislating drug use began, and make no real sense from a social or medical perspective in our world today.[26]

With appropriate changes in scheduling of banned drugs we may finally get answers to the legitimate question "What are the medical benefits of marijuana."

Conflict of Interest

The author does not identify any conflicts of interest.

Author's Biography:

Dr. McKenna graduated from Marist College in New York with a Bachelor of Arts degree in Biology in May 1962. He received his MD from the State University of New York — Upstate Health Sciences University, Syracuse, New York in May, 1966.

He completed a rotating internship at San Francisco General Hospital, University of California, from July 1, 1966, to June 30, 1967.

He completed a residency in Psychiatry at the Massachusetts Mental Health Center, Harvard Medical School, 1967 to 1970. He was a Chief Resident at the Cambridge Hospital Department of Psychiatry, at that time an integral part of the Massachusetts Mental Health Center, from 1969 to 1970.

Following two years in the United States Air Force as a captain from 1970 to 1971 as Chief of Psychiatry at the 11th US Air Force Hospital, U-Tapao, Thailand, and then

as a Major at the Pentagon, working with the Social Actions Assistance Team from August 1971 to August 1972.

He was on the faculty of Psychiatry at Harvard Medical School from 1972 to 1980 as an Instructor of Psychiatry. He was then on the faculty of the UCLA School of Medicine as an Adjunct Associate Professor of Psychiatry from 1980 to 1988. He was the Assistant Chief of Psychiatry at VAMC Brentwood from 1980 to 1984 and then Associate Chief of Psychiatry from 1984 to 1987.

He relocated to the island of Kaua'i where he has been in the practice of General Psychiatry and Addiction Medicine from March 1988 until the present time. He has held the academic rank of Associate Clinical Professor of Psychiatry at the John A. Burns School of Medicine, University of Hawai'i.

He has been the Medical Director of the McKenna Recovery Center, an outpatient addiction treatment program, from, 1989 to the present. He lives with his family on Kaua'i.

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