

Cannabis as a Substitute for Alcohol: A Harm-Reduction Approach

Tod H. Mikuriya

ABSTRACT. Ninety-two Northern Californians who use cannabis as an alternative to alcohol obtained letters of approval from the author. Their records were reviewed to determine characteristics of the cohort and efficacy of the treatment, which was defined as reduced harm to the patient. All patients reported benefit, indicating that for at least a subset of alcoholics, cannabis use is associated with reduced drinking. The cost of alcoholism to individual patients and society at large warrants testing of the cannabis-substitution approach and study of the drug-of-choice phenomenon. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2004 by The Haworth Press, Inc. All rights reserved.]*

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INTRODUCTION

Physicians who treat alcoholics are familiar with the cycle from drunkenness and disinhibition to withdrawal, drying out, and apology for behavioral lapses, accompanied over time by illness and debility as

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the patient careens from one crisis to another. “Harm reduction” is a treatment approach that seeks to minimize the occurrence of drug/alcohol addiction and its impacts on the addict/alcoholic and society at large. A harm-reduction approach to alcoholism adopted by 92 of my patients in Northern California utilizes the substitution of cannabis, with its relatively benign side-effect profile, as the intoxicant of choice.

No clinical trials of the efficacy of cannabis as a substitute for alcohol are reported in the literature, and there are no papers directly on point prior to my own account (Mikuriya 1970) of a patient who used cannabis consciously and successfully to discontinue her problematic drinking.

There are ample references, however, to the use of cannabis as a substitute for opiates (Birch 1889) and as a treatment for delirium tremens (Clendinning 1843; Moreau 1845), which were among the first uses by European physicians. The 1873 Indian Government Finance Department Resolution recommended against suppressing cannabis use for fear that people (p. 1395) “would in all probability have recourse to some other stimulant such as alcohol.”

The Indian Hemp Drugs Commission Report of (1893-1894) articulated the same concern (p. 359): “. . . driving the consumers to have recourse to other stimulants or narcotics which may be more deleterious.” Birch (1889) described a patient weaned off alcohol by use of opiates who then became addicted and was weaned off opiates by use of cannabis. He noted (p. 625), “Ability to take food returned. He began to sleep well; his pulse exhibited some volume; and after three weeks he was able to take a turn on the verandah with the aid of a stick. After six weeks he spoke of returning to his post, and I never saw him again.”

Birch feared that cannabis itself might be addictive, and recommended against revealing to patients the effective ingredient in their elixir (p. 625), “Upon one point I would insist—the necessity of concealing the name of the remedial drug from the patient, lest in his endeavor to escape from one form of vice he should fall into another, which can be indulged with facility in any Indian bazaar.” This stern warning may have undercut interest in the apparently successful two-stage treatment he was describing.

At the turn of the 19th century in the United States, cannabis was listed as a treatment for delirium tremens in standard medical texts (Edes 1887; Potter 1895) and manuals (Lilly 1898; Merck 1899; Parke Davis 1909). Since delirium tremens is associated with advanced alcoholism, we can adduce that patients who were prescribed cannabis and used it on a long term basis were making a successful substitution.

By 1941, due to its prohibition, cannabis was no longer a treatment option, but attempts to identify and synthesize its active ingredients continued (Loewe 1950). A synthetic THC called pyrahexyl was made available to clinical researchers, and one paper from the postwar period reports its successful use in easing the withdrawal symptoms of 59 out of 70 alcoholics (Thompson and Proctor 1953).

In 1970 the author reported (Mikuriya 1970) on Mrs. A., a 49-year-old female patient whose drinking had become problematic. The patient had observed that when she smoked marijuana socially on weekends she decreased her alcoholic intake. She was instructed to substitute cannabis any time she felt the urge to drink. This regimen helped her to reduce her alcohol intake to zero. The paper concluded (p. 175), "It would appear that for selected alcoholics the substitution of smoked cannabis for alcohol may be of marked rehabilitative value. Certainly cannabis is not a panacea, but it warrants further clinical trial in selected cases of alcoholism."

The warranted research could not be carried out under conditions of prohibition in the USA, but in private practice and communications with colleagues I encountered more patients like Mrs. A. and generalized that somewhere in the experience of certain alcoholics, cannabis use is discovered to overcome pain and depression, target conditions for which alcohol is originally used, but without the disinhibited emotions or the physiologic damage. By substituting cannabis for alcohol, patients were able to reduce the harm their intoxication caused themselves and others.

Although the increasing use of marijuana starting in the late '60s had renewed interest in its medical properties, including possible use as an alternative to alcohol (Scher 1971), meaningful research was prevented until the 1990s, when the establishment of "buyers clubs" in California created a potential database of patients who were using cannabis to treat a wide range of conditions. The medical marijuana initiative passed by voters in 1996 mandated that prospective patients obtain a doctor's approval in order to treat a given condition with cannabis, resulting in an estimated 30,000 physician approvals as of May 2002 (Gieringer 2003).

In a review of my records in the spring of 2002, 92 patients were identified as using cannabis to treat alcohol abuse and related problems. This paper describes characteristics of that cohort and the results of their efforts to substitute cannabis for alcohol.

METHODOLOGY

Identifying Alcoholism

The initial consultation (20 minutes) provided multiple opportunities to identify alcoholism as a problem for which treatment with cannabis might be appropriate. The intake form asked patients to state their reason for contacting the doctor, and enabled them to prioritize their present illnesses and describe the course of treatment to date. The form also asked patients to identify any non-prescribed psychoactive drugs they were taking (including alcohol), and invited remarks. A specific question concerned injuries incurred “while or after consuming alcohol.” Examination of medical records provided an additional opportunity to identify alcohol abuse, as did the taking of a verbal history.

Evaluating Efficacy

At follow-up visits (typically at 12-month intervals), patients were asked to list the conditions they had been treating with cannabis and to evaluate their status as “stable,” “improved,” or “worse.” Patients were asked to evaluate the efficacy of cannabis (five choices from “very effective to “ineffectual”) and to describe any adverse events. Patients were also asked to describe any changes in their “living and employment situation,” and if so, to elaborate. The question about use of non-prescribed psychoactive drugs, including alcohol, was repeated. Comparison of responses in a given patient’s initial and follow-up questionnaires enabled assessment of the utility of cannabis as an alternative to alcohol.

Patient Background

Gieringer (2003) notes that (p. 55), “Many patients who find marijuana helpful for otherwise intractable complaints report that their physicians are fearful of recommending it, either because of ignorance about medical cannabis, or because they fear federal punishment or other sanctions. This is especially true in regions where the use of marijuana is less familiar and accepted.” The patients whose records form the basis for this study were all seen in ad hoc settings arranged by local cannabis clubs, 88 in rural counties of Northern California, four in the San Francisco Bay Area. They form a special but not unique subset, having intentionally sought out a physician whose clinical use of canna-

bis and confidence in its versatility and relative safety was extensive and well known in their communities.

A majority of the patients identified themselves as blue-collar workers: carpenter (5), construction (3), laborer (3), waitress (3), truck driver (3), fisherman (3), heavy equipment operator (3), painter (2), contractor (2), cook (2), welder (2), logger (2), timber faller, seaman, hardwood floor installer, bartender, building supplies, house caretaker, ranch hand, concrete pump operator, cable installer, silversmith, stone mason, boatwright, auto detailer, tree service-handyman-cashier, nurseryman, glazier, gold miner, carpet layer, carpenter's apprentice, landscaper, river guide, screenprinter, and glassblower.

Eleven were unemployed or did not list an occupation; four were disabled, two retired, and two patients defined themselves as mothers. Others were in sales (5), musicians (5), clerical workers (3), paralegal, teacher, actor, actress, artist, sound engineer, and computer technician. Eighty-two of the patients were male. Patients' ages ranged from 20 to 69. Twenty-nine were in their twenties; 16 in their thirties; 24 in their forties; 20 in their fifties; and three in their sixties. Exactly half (46 patients) had taken some college courses, but only four had college degrees. Five did not complete high school. Thirteen were veterans, all branches of the Armed Forces being represented. All but six (five native-Americans, one African-American) were Caucasian. Slightly more than half (49) reported being raised by at least one addict/alcoholic parent.

Prioritizing Alcoholism

Fifty-nine of the patients identified alcoholism or cirrhosis of the liver as their primary medical problem. Secondary and tertiary problems reported by this group were depression (19), pain (17), insomnia (15), arthritis (8), anxiety/stress (8), PTSD (3), cramps (4), hepatitis C (4), gastritis (2), ADHD (2), cramps/PMS (3), scoliosis, irritable bowel syndrome, glaucoma, and anorexia.

Thirty-three patients identified themselves as alcohol abusers, but reported other problems as more significant: pain (12), depression (7), anxiety/stress (6), headache/migraines (5), insomnia (5), head injuries (3), bipolar disorder (3), arthritis (2), asthma (2), spinal cord injury/disease (2), gastritis (2), paraplegia, ADHD, multiple broken bones, Parkinson's, and cramps.

Nineteen patients reported having been injured while or after drinking heavily.

Fourteen had incurred legal problems or been ordered into rehab programs.

Cannabis Use/Awareness of Medicinal Effect

Patients were asked when they started using cannabis and when they realized it exerted a medicinal effect. Three reported first using at age 9 or younger; 61 between ages 10 and 19; nine began using in their 20s; three in their 30s; six in their 40s; two at age 50; and one at age 65. Twenty-four patients reported realizing immediately upon using cannabis that it exerted a beneficial medical effect. Some of their responses still seem to reflect their relief at the time:

- “In 1980 I had quit drinking for a month. My niece asked me if I ever tried marijuana to calm me down. So I tried it and it worked like a miracle.”
- “Helped pain very much! Helped sleep—excellent.”

Thirty-five patients answered ambiguously with respect to time: “When realized preferred to alcohol,” for example, or, “when I smoked when suffering.”

Seven reported becoming aware of medical effect within a year of using cannabis. Ten became aware within one to five years. Three became aware of medical effect 12-15 years after first using. Ten became aware between 20 and 30 years after first using. All but one of these patients had resumed using cannabis after years of abstinence.

Use of OTC and Prescription Drugs

Patients were asked to list other drugs (prescribed, over-the-counter, and herbal) that they were currently using or had used in the past to treat their illnesses. Most common of the prescription drugs were SSRIs (31), opiates (23), NSAIDs (18), disulfuram (15), and Ritalin® (methylphenidate) (8).

Delivery Systems

Seventy-eight patients smoked joints, the average amount being one joint a day (assuming 3.5 joints per 1/8 ounce of high-quality mari-

juana). Twelve patients reported using a pipe, and three owned vaporizers. All were strongly advised that smoking involves an assault on the lungs, and that vaporization is a safer method of inhaling cannabinoids.

OBSERVATIONS

Alcoholic Parents

A slight majority of patients (51) reported being raised by at least one alcoholic parent. This is not surprising. The children of alcoholics enter adulthood with two strikes. They have endured direct emotional abuse and/or abandonment by parent(s), and they lack role models for coping with uncomfortable feelings other than by inebriation. It is to be expected that many, when encountering problems early in life, are treated with, or seek out, mind-altering drugs.

Reported Efficacy

As could be expected among patients seeking physician approval to treat alcoholism with cannabis, all reported that they'd found it "very effective" (45) or "effective" (38). Efficacy was inferred from other responses on seven questionnaires. Two patients did not make follow-up visits but had reported efficacy at the initial interview.

Nine patients reported that they had practiced total abstinence from alcohol for more than a year and attributed their success to cannabis. Their years in sobriety: 19, 18, 16, 10, 7, 6, 4 (2), and 2.

Patients who reported a return of symptoms when cannabis was discontinued (19), ranged from succinct to dramatic:

- "I started drinking a lot more."
- "More anxiety, less happiness."
- "Use alcohol when cannabis isn't available."
- "If I don't have anything to smoke, I usually drink a lot more."
- "I quit using cannabis while I was in the army and my drinking doubled. I was also involved in several violent incidents due to alcohol."
- "My caretaker got arrested and I lived too far from the city to purchase at a club, and I started doing heroin again and almost killed myself and some of my friends."

- “Stress level becomes higher, become more uptight. Went back to drinking in the 1970s.”—A female patient with 19 years of sobriety.

Several patients specifically noted that cannabis use reduced the craving for alcohol:

- “I crave alcohol when I can’t smoke marijuana.”
- “Had to quit drinking at 48 yrs. old. Found cannabis helped stop the urge to drink.”—A 69-year-old commercial fisherman.

Three patients reported a sad irony: they had “fallen off the wagon” when they had to stop using cannabis in anticipation of drug tests. Patient S., a 27-year-old cable installer, had six alcohol-related arrests by age 21, “. . . after not smoking herb (for probation drug test) and blacking out on alcohol, I found my drinking getting out of hand and I began getting into more trouble.” He later relapsed when denied use of cannabis at a residential treatment facility.

Cannabis for Analgesia

The large number of patients using cannabis for pain relief (29) reflects the high percentage of blue-collar workers who suffer musculoskeletal injury during their careers. As expressed by a carpenter, “Nobody gets to age 40 in my business without a bad back.” Nurses who must lift gurneys, farm workers, desk-bound clerical workers, and many others are also prone to chronic back and neck pain.

Fights and accidents (vehicular, sports- and job-related) also create chronic pain patients, many of whom self-medicate with alcohol.

Eighteen patients reported having been injured while or after drinking heavily. This comment by a 26-year-old truck driver describes a typical chain-reaction of alcohol-induced trouble: “Injured in a fight after consuming alcohol, resulted in staph infection of right knuckle, minor surgery and four days in hospital.” Injuries suffered while drunk add to pain and the need for relief by alcohol, or a less destructive alternative.

A total of 29 patients reported using cannabis for both pain relief and as an alternative to alcohol. A 47-year-old landscaper was run over by a vehicle at age 5, requiring multiple surgeries and leaving him with pins in his right ankle: “Given pain pills for my right ankle, I got too drowsy. Smoked herb to relieve pain.” After he had to discontinue cannabis use,

he reported, “was unable to ease pain in ankle without herb, and drink when unable to have cannabis to smoke.”

Cannabis for Mood Disorders

Twenty-six patients reported using cannabis to treat depression (44 if the category is expanded to include anxiety, stress, and PTSD), and their comments frequently touched on the negative synergies between mood disorders and alcoholism. A 44-year-old paralegal, suffering from depression, alcoholism, and PMS, noted simply, “Alcohol causes more depression.” When she did not have access to cannabis, she noted, “Alcohol consumption increases and so does depression.” At her initial visit she reported consuming 5-10 drinks/day. At a follow-up visit (after 16 months) she had confined her consumption to weekend usage.

A 33-year-old river guide (and decorated Army vet) put it this way: “I have had a problem with violence and alcohol for a long time and I have a rap sheet to prove it. None of the problems occurred while using cannabis. Not only does cannabis prevent my violent tendencies, but it also helps keep me from drinking.” On his follow-up visit (12 months) this patient reported improved communication with family members and fewer problems relating to other people. His alcohol consumption had decreased from 36 drinks/week to zero (one month of sobriety).

Patient L.G. presented initially at age 35 as homeless and unemployed, suffering “severe depression. Anxiety. Pain.” Her problem with alcohol was inferred from her response concerning non-medical-psychoactive drug use: “I drink and smoke too much—started when I couldn’t get marijuana.” L.G. had requested a recommendation for cannabis from a Humboldt County physician but, as she recounted, “I’m paranoid and local doctors are scared, too. They gave me Paxil® [paroxetine] and stop smoking pamphlet.” At a follow-up visit (14 months), L.G. reported a change in circumstance: “Now have a room. But am on G.R. [General Relief] and am paying too much.” She was still using alcohol “a little. I’m doing good dealing with not drinking. Being able to meditate with cannabis has helped a lot.” Eighteen months later the pattern hadn’t changed: “Alcohol several times/week. Depends on if I have cannabis, stress still triggers.”

Fewer Adverse Side-Effects

Compared with NSAIDs, steroids, SSRIs, opioids, and benzodiazepines, cannabis has a benign side-effect profile. In acute conditions

these other drugs may be tolerable, but taking them to treat chronic conditions may be worse than the illness. Patients' comments on their prescribed analgesics and anti-depressants tended to be negative with respect to efficacy (22), side-effects (26) and cost (15), not surprising, perhaps, in a cohort seeking an herbal alternative.

Patient R.B. presented as a 41-year-old alcoholic also suffering from arthritis, pain from knee and ankle surgeries, and depression, for which he had been prescribed Librium® (chlordiazepoxide), Valium® (diazepam), Buspar® (buspirone), Welbutrin® (bupropion), Effexor® (venlafaxine), Zoloft® (sertraline), and Depakote® (valproate) over the years; "No help!" he wrote bluntly. On his return visit (one year) he reported "few relapses" and was able to take some classes.

The dulling effects of Vicodin® (hydrocodone) and other opiates were mentioned by seven patients. As patient P.B. put it, "When I can get Vicodin it helps the pain but I don't like being that dopey."

Patient S.F., whose skull was badly damaged in an accident, also appreciated the pain relief but asserted that opiates (obtained through the Veterans' Administration) "made me paranoid and mean."

Patient C.A., who was diagnosed with attention-deficit hyperactivity disorder (ADHD) in ninth grade, touches on some recurring themes in describing the treatment of his primary illness: "I was prescribed Ritalin and Zoloft. The Ritalin helped me concentrate slightly but caused me to be up all night. The Zoloft made me sick to my stomach and never relieved my stress or depression. I have never been prescribed anything for my insomnia but I usually have to drink some liquor to get to sleep. I think that is a bad thing as I have now begun to drink excessive amounts of whisky, which has really started to affect my stomach."

C.A. first used cannabis at age 19 and became aware of benefits immediately. "I found myself running to the refrigerator and then sleeping better than I had for years." At age 21 he fears permanent damage. "From drinking (I believe) my stomach has been altered, along with my appetite . . . I cannot really eat that much and feel malnourished and weaker than a 21-year-old should. My joints ache constantly and I am not as strong as I used to be. I also fear that I will become or am an alcoholic and I do not want to see myself turn into my dad."

At his follow-up visit (12 months), C.A. reported cannabis to be "very effective." He was employed, "not partying," doing well socially, and trying to give up cigarettes.

Interactions, Positive and/or Negative

Several patients (3) indicated that cannabis had a welcome amplifying effect on the efficacy of other medications. As cannabis comes into wider use in California and elsewhere, it is important that its interactions with other medications be studied and publicized.

DEFINING SUCCESS

The harm-reduction approach to alcoholism is based on the recognition that for some patients, total abstinence has been an unattainable goal. Success is not defined as the achievement of perpetual sobriety. A treatment may be deemed helpful if it enables a patient to reduce the frequency and quantity of alcohol consumption; if drunken episodes and/or blackouts are reduced; and if success in the workplace can be achieved; if specific problems induced by alcohol (suspended driver's license, for example) can be resolved; and if ineffective or toxic drugs can be avoided.

As noted, all of the patients in this study were seeking physician's approval to use cannabis medicinally, a built-in bias that explains the very high level of efficacy reported. However, the vast majority presented with comorbid conditions, and would have qualified for physician's approval to use cannabis whether or not they reported efficacy with respect to alcoholism.

Although medicinal use of cannabis by alcoholics can be dismissed as "just one drug replacing another," lives mediated by cannabis and alcohol tend to run very different courses. Even if use is daily, cannabis replacing alcohol (or other addictive, toxic drugs) reduces harm because of its relatively benign side-effect profile. Cannabis-only usage is not associated with car crashes; it does not damage the liver, the esophagus, the spleen or the digestive tract.

The chronic alcohol-inebriation-withdrawal cycle ceases with successful cannabis substitution. Sleep and appetite are restored, ability to focus and concentrate is enhanced, energy and activity levels are improved, and pain and muscle spasms are relieved. Family and social relationships can be sustained as pursuit of long-term goals ends the cycle of crisis and apology.

Patient M.S., a 42-year-old journeyman carpenter, is a success story from a harm-reduction perspective. At his initial visit he defined his problem as "intermittent explosive disorder," for which he had been prescribed Lithium. Although drinking eight beers a day, he reported

“Cannabis has allowed me to just drink beer when I used to blackout drink vodka and tequila.” By the time of a follow-up visit (12 months), Mark had been sober for four months. He also reported, “anger out-breaks less severe, able to complete projects,” and, poignantly, “paranoia is now mostly realism.” He plans to put his technical skill to use in designing a vaporizer.

THE DOCTOR-PATIENT RELATIONSHIP

As a certified addictionologist, I have supervised both inpatient and outpatient treatment for thousands of patients since 1969. In the traditional alcoholism medical-treatment model, the physician is an authority figure to a patient whose life has spun out of control. The patient enters under coercive circumstances, frequently under court order, with physiologies in toxic disarray. Transference dynamics cast the physician into a parental role, producing the usual parent-child conflicts. After detoxification when cognition has returned from the confusional state of withdrawal, the patient leaves, usually with powers of denial intact. Follow-up outpatient treatment is oriented to Alcoholics Anonymous (AA) and/or pharmacological substitutes.

Treating alcoholism by cannabis substitution creates a different doctor-patient relationship. Patients seek out the physician to confer legitimacy on what they are doing or are about to do. My most important service is to end their criminal status, Aeschalopian protection from the criminal justice system, which often brings an expression of relief. An alliance is created that promotes candor and trust. The physician is permitted to act as a coach or an enabler in a positive sense.

As enumerated by patients, the benefits can be profound: self-respect is enhanced; family and community relationships improve; a sense of social alienation diminishes. A recurrent theme at follow-up visits is the developing sense of freedom as cannabis use replaces the intoxication-withdrawal-recovery cycle, freedom to look into the future and plan instead of being mired in a dysfunctional past and present; and freedom from crisis and distraction, making possible pursuit of long-term goals that include family and community.

RE: ALCOHOLICS ANONYMOUS

Although nine patients made voluntary reference to attending AA meetings (three presently, six in the past), it is likely that many more ac-

tually tried the 12-step program, but the question was not posed on the intake form. A future study should examine the relationship between cannabis-only users and Alcoholics Anonymous. At AA meetings, cannabis use is considered a violation of sobriety. This puts cannabis-only users in a bind. Those who attend meetings can't practice the "rigorous honesty" that AA considers essential to recovery; and those who avoid meetings are denied support and encouragement that might help them to stay sober. Support-group meetings at which cannabis-only users are welcome would be a positive development.

Patient T.H., first seen at age 29, was diagnosed as an alcoholic in 1987 and began attending AA meetings, which he found helpful although he could not achieve sustained sobriety. In 1998, after realizing that cannabis reduced his cravings for alcohol, he received approval to use it. At a follow-up in November '99, he reported, "Have stopped drinking for the first time in many years. I have not taken a drink of alcohol in 14 months. I attribute some credit for this to daily use of cannabis. My life has improved with this treatment."

T.H. was seen again in April 2001 and reported, "I continue to maintain sobriety regarding alcohol. Have not had a drink for 2 1/2 years. I drank alcohol heavy for about 10 years, and had difficulty stopping drinking and staying stopped until I began this treatment. Pain symptoms from back spasms/scoliosis also better."

FACTORS IN DRUG OF CHOICE

Experimentation with drugs and alcohol typically begins in adolescence and participants in the present study fit the well established pattern. It is also in adolescence that most individuals select a drug-of-choice. Factors in the process have not been thoroughly studied, but drug-of-choice is not simply a function of an individual's brain chemistry; social group plays a key role (Carstairs 1951).

Carstairs spent a year in a large village in northern India where the two highest castes, Rajputs and Brahmins, consumed alcohol and cannabis, respectively. The Rajputs were the warriors and governors; they viewed the alcohol-inspired release of emotions, notably sexual and aggressive impulses, as admirable. The Brahmins were the religious leaders whose emphasis on self-denial included (p. 79.), "the avoidance of anger and or any other unseemly expression of personal feelings; abstinence from meat and alcohol is a prime essential."

Carstairs' goal was to understand how the Brahmins could rationalize intoxicant use. He concluded (p. 79):

There are alternative ways of dealing with sexual and aggressive impulses besides repressing them and then 'blowing them off' in abreactive drinking bouts in which the superego is temporarily dissolved in alcohol. The way which the Brahmins have selected consists in a playing down of all interpersonal relationships in obedience to a common, impersonal set of rules of Right Behavior . . . Whereas the Rajput in his drinking bout knows that he is taking a holiday from his sober concerns, the Brahmin thinks of his intoxication with bhang as a flight not from but toward a more profound contact with reality.

Two aspects of Carstairs' report resonate strongly with my own observations:

1. The disinhibition achieved via alcohol is the Rajput kind, a flight from reality, becoming "blotto," whereas the disinhibition achieved via cannabis is the result of focused or amplified contemplation.
2. "Drug of choice" tends to be—perhaps invariably is—determined by social factors, and, once determined, becomes a defining element of individual self-image, i.e., possible but not easy to change in adulthood. Undoubtedly, alcohol's status as a legal drug that is widely advertised and can be purchased virtually anywhere influences the number of college students and other young adults who make it their initial drug of choice. Perhaps the firmer implementation of California's medical marijuana law will make it possible to study whether young adults with a family history of alcoholism, given no legal obstacle to using cannabis as an alternative to alcohol, would do so, with positive results.

REFERENCES

- Birch, E.A. 1889. The use of Indian hemp in the treatment of chronic chloral and chronic opium poisoning. *Lancet* 1(March 30):625.
- Carstairs, G.M. 1951. Bhang and alcohol: Cultural factors in the choice of intoxicants, from *Marihuana Papers*, Ed. Solomon, D. Bobbs Merrill: New York.
- Cleninning, J. 1843. Observation on the medicinal properties of *Cannabis sativa* of India. *Medical-Chiurgical Transactions* 26:188-210.

- Edes, R.T. 1887. *Text book of therapeutics and materia mmedica*. Lea Bros. Philadelphia.
- Gieringer, D. 2003. The acceptance of medical marijuana in the U.S. *J Cannabis Therapeutics* 3(1):53-65.
- Government of India Financial Department. (1873). *Effects of the use of ganja and other preparations of the hemp plant*. Resolution No. 3773 Supplement to the Gazette of India, December 27, 1395-9.
- Indian Hemp Drugs Commission. (1893-1894). *Report*. Government Central Printing Office, Simla I:XVIII 359.
- Lilly's, E. 1898. *Hand book of pharmacy & therapeutics*. Fifth revision. Indianapolis.
- Merck Manual*. 1899. New York.
- Mikuriya, T.H. 1970. Cannabis substitution: An adjunctive therapeutic tool in the treatment of alcoholism. *Medical Times* 98(4):187-91.
- Moreau, J.-J. 1845. *Hashish and Mental Illness*. Raven Press, New York, 1973.
- Parke-Davis. 1909. *Manual of therapeutics*. Detroit, MI.
- Potter, S.O.L. 1895. *Materia medica, pharmacy and therapeutics*. Blakiston & Son: Philadelphia.
- Scher, M.S. 1971. Marijuana as an agent in rehabilitating alcoholics. *Amer J Psychiat* 127:7.
- Thompson, L.J. and R.C. Proctor. 1953. The use of pyrahexyl in the treatment of alcoholic and drug withdrawal conditions. *N Carolina Med J* 14:520-3.

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