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Medical Use of Cannabis "Marijuana"

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Abstract

Medical marijuana is currently a contentious debatable issue. There are strong opponents and proponents opinions but relatively little scientific data on which to base medical decisions. Unfortunately, classifying marijuana as a Schedule I drug result in limiting research studies and only serves to fuel the debate. This position statement paper frames the opponents and proponents viewpoints toward medical use of marijuana, and support the cautious and compassionate use of medical marijuana to treat patients with debilitating medical conditions and symptoms who have failed to respond to other therapies. Based on the reviewed literature, the evidence demonstrates a connection between therapeutic use of marijuana and symptom relief. Thus, many patients, physicians, and researchers have voiced support for the use of medical marijuana. Health care providers should be educated toward the efficacy and safety of medical marijuana. Also, further research is needed to improve the knowledge of potential therapeutic benefits and health negative outcomes of marijuana.

Keywords: Cannabinoids; Cannabis; Marijuana; Medical use; Position statement

Introduction

Medical use of cannabis (marijuana) have been recognized for hundreds of years, it is reported that the first use of medical cannabis goes back to 2800 BC in china as a painkiller drug [1]. Also, it has been proven that using medical marijuana in alleviating symptoms of a wide range of medical conditions such as HIV/AIDS, Epilepsy, Cancer, Multiple sclerosis, Crohn's disease, Glaucoma, and Alzheimer's disease, was very effective, as well as an alternative to narcotic painkillers [2]. However, medical marijuana defined as using any part of the plant Cannabis Sativa (marijuana) and its constituent cannabinoids, prescribed by a trained medical professional to treat diseases or alleviate symptoms, which there is a research demonstrating it is efficacy as a choice of treatment [3]. In the last years, when some countries decided to make smoking marijuana as legal for certain patients, medical use of marijuana became as a contentious debatable issue. The debates on cannabis are about it is legalization, harmful side effect, and the fear of teenagers to believe that marijuana is safe for recreational use [4]. Till Oct 2014, the official number of total medical marijuana users in 19 (out of 23) states and District of Columbia holding identification cards with mandatory registration was 1,137,069 patient [5]. Position statement defined as a comprehensive declaration of the organization or researcher on a particular topic, it contains background information and discussion in order to provide a more complete understanding of the issues involved and the rationale behind the position set forth [6].

Therefore, the purpose of this position statement paper is to present opponents and proponents viewpoints toward medical use of marijuana, and to support the cautious and compassionate use of medical marijuana to treat medical conditions and to alleviate symptoms.

Literature Review

In 1970, Uniform Controlled Substance Act classified marijuana as a Schedule I drug, hence making possession of a Schedule I drug like marijuana, heroin, ecstasy and peyote illegal [7]. Under this Act, there are five schedules of drugs, schedule I, II, III, IV, and V. Schedule I drug has a high potential for abuse and has no accepted medical use in treatment due to a lack of accepted safety for use of the drug under medical supervision. A Schedule II drug has a high potential for abuse like a Schedule I drug but accepted medically for treatment with severe restrictions. Schedule III, IV, and V drugs have a low potential for abuse and are accepted for medical treatment [8]. Today, smoked marijuana is not the only form in circulation. There are many forms of marijuana that are used for medical purposes, including a synthetic form, Marinol (dronabinol), which is taken orally as analgesic to relieve neuropathic pain in multiple sclerosis patients, Nabilone, a Schedule II drug, similar to Marinol, used to treat nausea and vomiting induced by chemotherapy. Another form used in many countries called Sativex (nabiximols), a mouth spray whose chemical compound is derived from natural extracts of the cannabis plant used in treatment of neuropathic pain and spasticity in patients with Multiple Sclerosis [9]. A wide social, expert, and policy debate has been recently appearing around the use of cannabis for medical purposes. Therefore, the purpose of this section is to identify different proponents and opponents positions toward medical use of marijuana.

Proponents of Using Medical Marijuana

In recognition and acceptance of the efficacy of medical marijuana, twenty-three states have approved initiatives to make marijuana legal for medical purposes, including: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Minnesota, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington, as well as the District of Columbia [10].

The Schedule I classification of cannabis in the US makes the study of medical marijuana difficult [9]. However, it was approved that medical marijuana has many potential beneficial effects as following:

Nausea and vomiting

Guidelines from the National Comprehensive Cancer Network

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(NCCN) state that cannabinoids such as dronabinol can be considered for refractory nausea and vomiting and as a rescue antiemetic [11]. Also, in 2012 Bowles and his colleagues found that cannabinoids are more effective than some conventional antiemetics such as prochlorperazine, promethazine, and metoclopramide in controlling chemotherapy induced nausea and vomiting [12].

A systematic review conducted by Whiting and his colleagues in 2015 supports using cannabinoids as a treatment for nausea and vomiting induced by chemotherapy, researchers analyzed data from twenty-eight studies, and found that patients using cannabinoids were more likely to report reductions in nausea and vomiting than those given a placebo [13].

Cancer

Although there has been a small research into using cannabinoids as a cancer treatment in people, medical use of cannabis has been shown to demonstrate some anti-cancer effects in laboratory experiments [12]. Moreover, cannabinoids have been found to help in killing breast cancer cells, and fighting liver cancer [14,15].

Pain

Cannabis appears to be effective for the treatment of chronic pain, it was examined by Lynch and Campbell in 2011 using a randomized controlled trial. The cannabinoids studied were smoked marijuana, oromucosal extracts of cannabis-based medicine, Nnabilone, Marinol and a novel THC analog, types of pain were neuropathic pain, rheumatoid arthritis, fibromyalgia, and mixed chronic pain. The results of the study confirmed that cannabinoids are safe and moderately effective in the treatment of the above-mentioned types of pain. Moreover, a review conducted by Whiting and his colleagues in 2015 found moderate quality evidence that cannabinoids were effective for chronic pain [13]. According to American Cancer Society 2015, Nabiximols which it is a specific extract of cannabis, has shown beneficial effect in helping people with cancer pain that is unrelieved by strong pain medications, but it has not been found to be helpful all the time [16]. In March. 17, 1999, the Institute of Medicine published a report titled "Marijuana and Medicine: Assessing the Science Base": they conclude that the available evidence from animal and human studies indicates that cannabinoids can have a substantial analgesic effect [17].

Multiple sclerosis (MS)

Current treatment of MS is primarily symptomatic, many research studies have reported enhancement in patients treated with cannabinoids for symptoms including spasticity, chronic pain, tremor, sexual dysfunction, bowel and bladder dysfunctions, vision weakness, dysfunctions of walking and balance "ataxia", and memory loss [18-21].

Public Opinion Census

In 2015, a survey conducted by Harris Poll on 2,221 U.S. adults, they found that support for the legalization of marijuana for both medical treatment and recreational use has increased by 7% over the past four years. Four in five adults (81%) favor legalizing marijuana for medical use. Also, nearly nine in ten democrats (87%) and independents (86%) are in favor of legalizing marijuana for medical treatment [22]. Moreover, a Quinnipiac University study was published in 2015 that confirms the growing support for Florida medical use of marijuana. The study was conducted on the three swing states: Florida, Ohio, and Pennsylvania. They found that 84% of Floridians support legalization of medical use of marijuana [23].

Organizations Position Statements Support the Use of Medical Marijuana

The American Academy of Family Physicians advocates that the medical use of marijuana should be based on high quality, patient-centered, evidence-based research [24].

Moreover, The American Nurses Association strongly advocates patients' rights to legally and safely use marijuana for symptom management and enhancing quality of life for patients desperately in need for such therapy [25].

Opponents of Using Medical Marijuana

Across various studies in multiple countries, marijuana use has been significantly connected with many negative acute and chronic health outcomes in the physical health, mental health, injury and mortality [26].

Addiction

There is a debate on the addictive potential of marijuana. According to the National Institute on Drug Abuse, about 9% of those who experiment with marijuana will become addicted. This number increase to 17% for those who start using marijuana as teenagers and up to 50% for those who smoke marijuana daily [27]. Marijuana addiction is linked to a mild withdrawal syndrome. Symptoms reported was: irritability, mood and sleep disturbances, decreased appetite, cravings, restlessness, and various forms of physical discomfort that peak within the first week after quitting and last up to 2 weeks [28,29].

Adverse health effect

Evidence supporting serious cardiovascular complications including myocardial infarction, stroke, sudden cardiac death, and cardiomyopathy has been reported to be temporally associated with marijuana use [30].

The other evidences supporting an association between marijuana use and sexual and reproductive effects are weak. However, a number of studies show an association between marijuana use and increased risk of testicular cancer [31]. Also, marijuana use during pregnancy does not appear to increase the risk of miscarriage or birth abnormalities but has been consistently associated with lower birth-weight babies and pre-term birth [32]. While, children, adolescents, and young adults who consume marijuana are at a higher risk than older adults for marijuana-related harms, including suicidal ideation, illicit drug use, cannabis use disorder, and long-term cognitive impairment as it is strongly suggests by current evidence [27]. Moreover, marijuana seems to induce psychotic symptoms and worsen conditions in patients already diagnosed with schizophrenia or other psychotic disorders [33].

Risk of abuse and misuse

Marijuana misuse is relatively common and associated with significant negative consequences [34]. Marijuana has been described as a "gateway" drug because its use usually precedes use of "harder" drugs such as cocaine and heroin, and frequent marijuana users have a much greater probability than nonusers of using heroin or cocaine in their lifetime [35].

Organizations Position Statements Oppose the Use of Medical Marijuana

National Association of Drug Court Professionals opposes "the legalization of smoked or raw marijuana; and opposes efforts to approve

any medicine, including marijuana, outside of the FDA process" [36]. Adolescents are especially susceptible to adverse consequences of marijuana use. Thus, the American Academy of Child and Adolescent Psychiatry opposes medical marijuana dispensing to adolescents [37]. In summary, after reviewing relevant scientific data and grounding the debate in medical use of marijuana, there is a strong argument for allowing physicians to prescribe marijuana. Proponents of medical marijuana fight that it can be a safe and effective treatment for the symptoms of many debilitating diseases supported by classical and evident research. On the other hand, opponents of medical marijuana argue that it is too dangerous to use, lacks FDA-approval, and that various legal drugs make marijuana use unnecessary. They say that medical marijuana is a front for drug legalization and recreational use since it is connected with a lot of negative health consequences.

Discussion

Position statement

The author of this paper is supporting the cautious and compassionate use of medical marijuana to treat medical conditions and to alleviate symptoms whenever regular medications have been exhausted. Compassion dictates that a distinction be made between medical and non-medical uses of marijuana.

While conclusive evidence regarding the safety of marijuana as a medical treatment is limited, the evidence demonstrates a connection between therapeutic use of marijuana and symptom relief. Thus, many patients, physicians, and researchers have voiced support for the use of medical marijuana.

There was no evidence that prescribing medical marijuana would increase illicit drug use. Therefore, the association between early marijuana use and later drug use and abuse or dependence may arise from the effects of the peer and social context within which marijuana is used and obtained [38].

Finally, in order to achieve a cautious and compassionate use of medical marijuana, several recommendations should be taken in consideration to be implemented. So, patients with debilitating symptoms who had been exhausting the regular conventional therapies could maintain a good quality of life [39] The following recommendations are synthesized based on the reviewed latest research evidences and updated practices literature:

- Increase health care provider education toward the efficacy and safety of cannabis, and comprehensive clinical management of patients using cannabis and its various components.

- Health care provider should provide patients and families with education and resources about medical marijuana as secondary treatment in certain conditions.

- Opposes prescribing of marijuana and its various components for medical purposes unless performed by licensed health care professionals whose scope of practice includes the dispensing of prescription medications and who comply with state and federal regulations.

- Close observation of patients will ensure appropriate use of medical marijuana, and training and education should be made available to providers whose patients use these medications.

- Health care providers can play a major role in the early identification of patients at risk of adverse health outcomes from marijuana use.

- Support the reclassifying of medical marijuana as a Schedule II drug to facilitate the process of studying medical marijuana, ensure patient access and allow for marijuana's legal regulation.

- Further research is needed to improve the knowledge of potential therapeutic benefits and health negative outcomes of marijuana, including the best practice treatment methods that provide the most benefit for the patients.

Summary and Conclusion

Debate about medical marijuana is challenging the basic foundations of the accepted practice in the medical, legal and ethical communities. However, the purpose of this position statement paper has been to frame the debate, with the latest evidence-based researches and practice, and to support the treatment of medical conditions and alleviating symptoms by using the medical marijuana [1].

Proponents in the medical field argue for medical use of marijuana based on its effectiveness in managing debilitating diseases [40,41]. The current another is supporting the use of medical marijuana cautiously and compassionately with patients who have debilitating symptoms and medical condition. In order to achieve that several recommendations were synthesized based on the reviewed literature [42].

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