Cannabis: The myth and medico-legal issues in current medical practice in Malaysia

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Abstract

Cannabis, also known by various names such as marijuana, ganja, grass, 'sayur,' 'tarekDaun,' Indian hemp, 'Barang weed,' joints, sticks, hashish, dope, pot, and weed in Malaysia (Harun, 2016) is a flowering plant that could produce at least 113 different cannabinoids with the most notable cannabinoids are the tetrahydrocannabinol (THC) and cannabidiol (CBD). Cannabis use had been backdated to 2900 B.C where it is mostly utilised for medical purposes. However, there are some misused for recreational purposes. Due to the socio-economic issues related to cannabis use, cannabis was prohibited worldwide. Not until recently, there is increasing questionable evidence proving the medical benefits of cannabis but also increasing evidence stating its adverse effect and debunking the myth related to cannabis use. Similar to the changes that occurred internationally, cannabis use in Malaysia had dated way before 1957, however, due to unregulated usage and social impact of drug abusers, cannabis was illegalized under Dangerous Drug Act 1952. It was accepted well until few judicial decisions that envisioned the use of medical cannabis is possible in Malaysia. Currently, despite the urge from public toward government to legalize cannabis in Malaysia, the law remains static and most likely remain the same until there is significant evidence that Medical Cannabis possesses more benefits to compare to its adverse effect.

Keywords: Medical Cannabis; Malaysia; legalization of medical Cannabis.

Introduction

Cannabis is a genus of a plant under the family of Cannabaceae, which has three species recognized as Cannabis sativa, Cannabis indica, and Cannabis ruderalis (1). Cannabis sativa is the species that produce at least 113 identified different cannabinoids with the most notable cannabinoid is the tetra hydrocannabinol (THC). THC is the principal psychoactive substance that contributes to the hallucinogenic effects of cannabis, which also limits its use due to the side effects. Apart from THC, there is another crucial cannabinoid substance in the plant, which is cannabidiol (CBD). Fibre type Cannabis sativa contains less than 0.3% THC by dry weight is called hemp or industrial hemp are the primary producer of CBD, and it is legalized by the 2018 Farm Bill in the United States of America (2). Unlike THC, CBD does not cause a psychoactive effect, but it has specific applications in managing illnesses such as managing pain (chronic and neuropathic), diabetes, cancer, and neurodegenerative diseases lie Huntington's disease (3). There are few terminologies related to drugs derived from cannabis which are including but not limited to marijuana, hemp, ganja, weed, grass, mariajúana (4).

History of cannabis use around the world

The use of cannabis in medicine can be dated back to the 2900 B.C, where the Chinese Emperor Fu Hsi, could be the first to make a medical reference to cannabis (5). Subsequently, there was evidence showing cannabis pollen on the mummy of Ramesses II, who died in 1213 BC. However, the palaeobotanists disagree that the crops have been a native species and suggested it was introduced to the mummy (6). Evidence of cannabis use in India traced back to 1000 BC, which is generally mixed with milk to be used as an aesthetic and anti-phlegmatic agent. Within the Sushruta Samhita , cannabis is used as an anti-phlegmatic and treatment for leprosy(7). In 200 BC, ancient Greece uses cannabis as the remedy for oedema, earache and inflammation. Subsequently, the usage of cannabis is increasing in popularity among many physicians across the continent. The usage includes but not limited to gastrointestinal symptoms, neurological symptoms, pain reliever and also sedation effects. Cannabis came to the United Kingdom by 1849 by Dr. William O'Shaughnessy, who introduced it as the healer for many ailments such as muscle spasm, menstrual cramps, tetanus, epilepsy and other (8). By the 19th century, in 1850, the usage of Cannabis in the western world is prevalence that it had made its way into the United States (US) Pharmacopeia, which is the official public document regulating all prescriptions and over the counter medications in the US. Cannabis made its way into The Lancet in 1889 when Dr E.A Birch outlines the usage of cannabis for the treatment of opium and chloral hydrate withdrawal symptoms. However, from the 1910s towards the 1930s, due to the increased rate of Mexican immigrants into the US and associations of Cannabis use among Africans, the US politicians had instilled unfounded fear towards cannabis. Even when the American Medical Association opposed the Marihuana Tax Act and continues to support the use of cannabis in medical research, the Marihuana Act was passed in 1937, where it imposes regulation and tax on any activity related to cannabis whether on growing, selling, and buying. The regulation and tedious law requirements had hinder physicians from prescribing cannabis for patients, and subsequently, cannabis was removed from the US pharmacopoeia after 87 years of usage in medicine. For a few years, the usage of cannabis is mainly for recreational use, and since then, penalty and enforcement had been stringent to curb usage of cannabis as recreational drugs. The discovery of CBD in 1964 by the Israeli scientists had lured multiple researches into CBD, a component of cannabis that does not have the psychoactive substance. In the UK, the Wootton Report finds that long term use of cannabis in moderate amounts has no harmful effects and is considered less dangerous compared to opiates, amphetamines, alcohol, and barbiturates (9). There were ongoing debates between the medical fraternity and the lawmakers and enforcers in the use and allowance of research on cannabis. It was not until in 1976 when Robert Randall was allowed to cultivate cannabis for the treatment of his glaucoma. Randall was the first American citizen being granted FDA-approved access to government supplies of medical cannabis for the treatment of a pathological medical condition (10).

Materials and Methods

This study adopts electronic library-based research by going through scientific databases such as PubMed, Google Scholar and Web of Sciences to provide insight into debunking myth related to Medical Cannabis and subsequently assessing the current acceptance and usage of Medical Cannabis in Malaysia by looking into other sources such as online news and reports. The keyword Medical Cannabis was used in combination with history, myths, advantages, disadvantages and Malaysia. All original articles, discussion and scientific documents were included without a time limitation.

Results

Debunking myth related to medical cannabis

One of the myths regarding cannabis is that it is nondependent. The myth is supported by the fact that there is only nine per cent of first-time users for cannabis will use it again in comparison to other drugs such as alcohol (15%), cocaine (17%), heroin (23%) and nicotine (32%)(11). Secondly, due to the long half-life of THC (25-57 hours) (12), cannabis users will require less 'dosage' in 24-48 hours interval, in contrast to the half-life of nicotine which is only 2 hours (13). Nicotine users need repeated 'dose' of it more compare to cannabis. Furthermore, physical symptoms related to cannabis addiction are less apparent in comparison to other CNS depressants such as alcohol and benzodiazepines(14). However, on the other hand, there are studies that have shown there are substantial addictions towards cannabis and significant cannabis withdrawal symptoms (15). Degree of dependences are linked with the age of first exposure, with those who started to smoke cannabis in adolescents are 2 to 4 more likely to be addicted compared to those who started to smoke in adulthood (16).

The second myth related to cannabis use is that it is safe to drive under the influence of cannabis as a comparison to other substances such as alcohol. This delusion might be contributed due to the fact that most traffic offenders are mostly tested for alcohol instead of THC. Therefore, less association of cannabis with traffic offenders compared to alcohol. However, specific epidemiological studies on the effect of cannabis on drivers have demonstrated that drivers under the influence of cannabis are still impaired. A study by Lenne, Dietze, & Trigss,(2010), for example, has shown that as task intensity of driving increases, the drivers will become more impaired, and high doses of cannabis were associated with decreased mean speed, increase variability in headways and longer reaction time (17).

Carroll (2016) argued that cannabis is the lesser of two evils compared to alcohol; therefore is he is forced to choose the substance that his child is going to be addicted to, he would choose cannabis. However, choosing the lesser evil is still choosing evil, when considering the effect of cannabis on teens which is promoting broad-spectrum underachievement, we should not choose what is less toxic but focus on the fact that cannabis also minimizes and reduce the optimal development of human potential (18). There are abundant data to suggest that long-term use of cannabis may cause a significant reduction of an individual's potential (19)(20)(21)(22)(23)(24)(25). However, there are counter-argument to this fact, such as cannabis users are mostly among the lower socio-economic status (SES); therefore, the Intelligence Quotient (IQ) level is due to the economic status and not contributed by cannabis use. But then, Moffitt, Meier, Caspi, & Poulton (2013) have done a study studying the relationship between low SES, IQ status and cannabis use, the study concluded, even is SES remains unchanged, IQ status is still lowered by the cannabis use by at least 10 (26).

Choosing the lesser evil is unjustified due to the fact that evil will lead a person to another evil. Early cannabis use may lead to addiction to other harder drugs such as cocaine, heroin and methamphetamine. However, Panlilio, Zanettini, Barnes, Solinas, & Goldberg (2013) proved differently in which while the use of cannabis may lead to the usage of another gateway drug, nicotine, but cannabis does not increase the use of cocaine and heroin, a result that could be challenged (27). Cannabis use will reduce dopamine responses in the brain and cardiovascular responses, causing blunted reward and heightened negative response (28). Therefore, in any cannabis use, that is followed by heroin use, the combination will result in the user needed to use more heroin to produce the same reward "high" effect. In other experiment, rats were introduced to cannabis, subsequently introduced to cocaine. These rats will be more anxious and restless compared to cocaine user alone. Therefore, even when it is said that cannabis use does not lead to cocaine and heroin addiction, it actually affected the condition of heroin and cocaine abuser by making them more likely to find more heroin to satisfy their needs while cannabis will heighten the adverse effects among cocaine abuser making them more paranoid, angry, hostile and anxious.

Current acceptance and usage of medical Cannabis in Malaysia

There are various legislations and policies developed to counter the misuse of dangerous drugs in Malaysia. In 19th February 1983, the problem with drug addiction in Malaysia was declared as the main threat for national security because it was identified if without strict regulations, drug menace will be epidemic to Malaysia (29). Under the Dangerous Drugs Act (DDA) 1952 (previously known as Dangerous Drug Ordinance), cannabis is listed as one of the main dangerous drug similar to cocaine (coca leaves), opium (raw opium) and morphine (poppy straw) and the other substance are listed in schedule 1 of the act. DDA is the principal legislation in Malaysia covering the penalties, procedural and evidential matters in order to regulate the importation, exportation, manufacture, sale and use, possession, cultivations and the uses of premises (30). It is an act that primarily use by law officers to detain, restrict and prevent anybody from being involved in drug trafficking activities whether as the trafficker, seller or user. The Dangerous Drugs Act(Forfeiture of Property (1988) are used to "curb the money laundering of the illegal drug trafficking (30)". Poison Act, (1952), "controls the manufacture, importation, transport, possession, compounding, sale, storage, and use of poisons"; drugs that are not listed under the First Schedule of the DDA 1952 (31). This is where the substances used in agricultural, industrial, and medical purposed falls in. "Supply, possession or administration of certain psychotropic substances can only be done through medical practitioners, dentists, and veterinarians" according to the (Poison Act, 1952) (31). Dangerous Drugs (Hospital, etc.) (General Exemption) Order,(1952) exempts "any public institutions supported by any public authority, public funds, charity or voluntary

subscription where dangerous drugs are dispensed by a registered pharmacist, or in his absence, by a registered medical practitioner." That Order also provides provisions for the safe custody, handling and records of the dangerous drugs in question. Drug Dependants (Treatment and Rehabilitation) Act 1983 mainly covers the treatment and rehabilitation policy of drug users.

The landmark change in the judicial system of Malaysia is when an American citizen was apprehended in Kuala Lumpur for the possession of Cannabis. However, with the assistance of a physician from the US, he was able to escape the death penalty and only ends up with 5 years jail and without any canning punishment despite the fact that he has over 500 grams of cannabis under his possessions(32). This could be the leading case that introduces the term Medical Cannabis in the Malaysia system and the first case that a death penalty is reversed on the basis of a medical condition (33). Schimdt (2018) conducted a questionnaire among the public in Malaysia on the attitude toward medical cannabis. In the study, it was identified that 81% of the respondent which are from the public agree for legalizing cannabis and said that it would be best for medical purposes however, 32% of the respondent admitted that they have been using cannabis for recreational purposes despite that cannabis is currently illegal in Malaysia. Another compelling argument in the study is that; he concluded the study by stating that cannabis was not directly prohibited in Islam, Islam only prohibited any substances that might harm the body, if cannabis is proven to have health benefits, and thus, by right it is not prohibited by Islam.

Discussion

The future of medical Cannabis in Malaysia

The recent case that had sparked controversies in Malaysia with regards to Medical Cannabis in the case of Mohd Zaireen Zainal who was the founder for Malaysian Cannabis Education Movement. Zaireen was initially charged for drug trafficking when he was caught at his house with possession of 1.1 kg cannabis and 58.5ml of THC. He was found guilty for trafficking by the high court in 2014 and a similar decision was upheld by the court of appeal. However, there was an uproar among the non-government organization pleading the Prime Minister to pardon all his charges (34). In the federal court, the court had decided that there were no elements of trafficking in his context as he was only producing it for medication purpose; to help those with chronic pain or as a supplement for general well-being. The court had approved his possession as for medical purposes; hence, freed him from the death penalty. This certainly raised another issue in which he was never a medical practitioner nor he ever studied medicine before. Does, this mean any layperson could grow cannabis at their backyard and process it for medical purposes, without proper prescription or qualification? As the consequences from the case, we have seen changes in attitude towards cannabis use in Malaysia. If previously, various legislation was developed to curb recreational use of cannabis in Malaysia, however, there are now opinions to allow cannabis for medical purposes and also recreational purposes in Malaysia (35). The latest stand for National Anti-Drugs Agency is that plantation of cannabis for medical purposes is only possible after permission from the Ministry of Health (36). The ministry of health agrees that government work toward decriminalizing personal possessions, personal use of drugs and drug addicts are not similar to legalising drugs. Therefore, medical cannabis can only be made available in Malaysia for medical treatment, medication and research but not in terms of planting and cultivation for other purposes (37).

Conclusion

From argument on debunking myth regarding Medical Cannabis, it is evident that there is lack of evidence proving the therapeutic benefit of cannabis, while most of the data appraising the effectiveness of cannabis are often based on a single study or personal observation (38).

Therefore, the significant change of attitude towards the acceptance of cannabis in medical practice is unjust and improperly evident. The evidence of its adverse health effects, even if it does not cause death are abundant, ranging from its effect on mental health, cognitive effects and respiratory system (38)(18). The cannabis plant may have a different amount of THC depending on the way it is cultivated. It is difficult for enforcement officers to ensure that all plants grow will only contain a certain amount of THC, and there are possibilities of the license being abused, for example, the patients who obtained permission to grow their own cannabis for medical purposes might have grown different strain of cannabis which might have higher amount of THC which is related to all the adverse side effect, or they might have abused their license to sell home-grown cannabis for others who use it as recreational drug.

Similar to changing the landscape at the international level, there are changes in acceptance of cannabis use in Malaysia from the unscientifically proven medical use of cannabis among the traditional medicine practitioner that contributed to the abuse of cannabis in 1900s century. Consequences on the development of various legislations to curb the abuse of the dangerous drug, the number of drug abuser reduce and exhibits positive feedback towards the social development of the country. However, there were recent controversies that spark the interest of the public toward the legalization of medical cannabis. Regardless, of the public opinion, legalization of cannabis should only be done if there is satisfying evidence to prove its health benefit overrule its adverse effects.

Conflict of Interest

None declared

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