
SPECIAL ARTICLE

Marijuana in Obstetric Patients

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ABSTRACT

Marijuana is a popular psychoactive substance in Thailand in this period after a recent Thai law announcement allowing the opportunity for its legal use in some medical situations. However, the increasing inclusion of marijuana in foods and beverages as well as its illegal recreational use may increase its use, including possibly by women during pregnancy and lactation. The aim of this article is to address the scientific knowledge, Thai law concerning marijuana, maternal and fetal effects of marijuana use during pregnancy and lactation, and to offer some suggestions about marijuana use in patients for obstetricians.

Keywords: marijuana, pregnancy, lactation, law.

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Marijuana is the second-most commonly used psychoactive substance (after alcohol) among pregnant women⁽¹⁾. In the United States, approximately 7% of pregnant women reported using marijuana⁽²⁾. The prevalence of marijuana use in Thai pregnant woman has never been reported. However, interest in marijuana use in Thailand has risen recently following the Thai government's relaxation of its marijuana laws in 2022. Hence, it is important that Thai obstetricians learn more about the effects of marijuana on the mother and fetus

during pregnancy, and postpartum, and how to deal with it.

Scientific knowledge about marijuana

Marijuana comes from a plant called hemp, which contains several chemical substances. It is a member of the Cannabaceae family, with the scientific name *Cannabis sativa*. The chemical substances derived from *Cannabis sativa* that affect humans are called cannabinoids⁽³⁾, which act on the cannabinoid receptors. The two known major

cannabinoids are tetrahydrocannabinol (THC) and cannabidiol (CBD)⁽³⁾. THC influences the human central nervous system and is responsible for the “high feeling” and for making users relaxed. Some side effects of THC are dry lips, thirstiness, tachycardia, slow response, and pink eye⁽⁴⁾. CBD is non-psychoactive and a THC antagonist. It can reduce seizures and vomiting and also has an anti-inflammatory property⁽⁴⁾.

During pregnancy, cannabinoids can pass through the placenta from the mother to the fetus⁽⁵⁾. Mothers can store these in body fat, especially in breast milk, and so they can be slowly passed down to the baby over time, even after the mother has stopped using marijuana⁽⁵⁾. THC increases in strength and concentration when it is mixed with other substance, such as alcohol or heating⁽⁶⁾. Pregnant woman can intake marijuana through several routes, such as eating, dabs, and smoking or vaporization. After absorption, THC works in the endocannabinoid (ECB) system, which is found throughout the human body, including the central nervous system⁽⁷⁾. THC is metabolized in the liver. Its half-life varies depending on the frequency of usage, from 20 - 36 hours to 4 - 5 days for occasional to heavy users, and its complete excretion period may be longer than 30 days for heavy users⁽⁸⁾.

Thai law on marijuana

In 2022, the Thai government announced several policies concerning marijuana as follows:⁽⁹⁾

(i) On February 8, 2022, the Ministry of Public Health with the approval of the Narcotics Control Board announced that the chemical extracted from all parts of marijuana (guncha) or hemp (gunchong), which is a plant in the Cannabis genus, is a Category 5 narcotic under Thailand’s narcotic code, except for extracts that contain THC of no more than 0.2% by weight. This exception applies only to marijuana or hemp that is domestically grown. In addition, under Thailand’s narcotic code, if such narcotics are substances that are used for the analysis of substance quality control and/or for the quality

control of drug testing in humans - and therefore considered as medical devices under the laws related to medical devices and used under the purposes of such medical devices - they shall be exempted from being deemed as a Category 5 narcotic. The rules allow people to grow the plant at home. However, the recreational use of marijuana is still discouraged.

(ii) On June 2, 2022, the Ministry of Public Health forbids the importation of marijuana or hemp, except by government agencies whose mission involves research or education.

(iii) On June 13, 2022, the Ministry of Public Health defined certain actions, including recreational use that causes a smell or smoke of marijuana or hemp or other nuisance plants that could affect the well-being or be harmful to health or cause small particles to be possible to enter the lungs by inhaling the smoke and causing a risk of illness, such as asthma or bronchitis, to be nuisance actions, according to the public health law, and stated that anyone who creates such a smell or nuisance in public would be charged.

Maternal and fetal effect of marijuana use during pregnancy and lactation

At present, the absolute effect of marijuana on pregnancy and lactation is still uncertain because there are several potential confounding factors, such as poverty, malnutrition, inadequate antenatal care seeking, and the potential use of other illicit drugs (e.g., alcohol and tobacco), which have been reported to be more prevalent in marijuana users than non-users⁽¹⁰⁾. To date, Thailand and the United States, through the US Food and Drug Administration, have never approved any marijuana-derived medication for treating any illness or disease during pregnancy and lactation including for morning sickness or hyperemesis relieve; albeit the available evidence does not definitely support marijuana being associated with fetal structural defects, a risk of stillbirth, perinatal death, birth weight less than 2,500 g, or preterm birth⁽⁸⁾. However, there is some data showing an increase in fetal anencephaly risk when

marijuana was used in the first month of pregnancy⁽¹¹⁾. In terms of the long-term neurological development of children who are heavily exposed to marijuana in utero, several studies have demonstrated an increased chance of attention deficiency, more hyperactivity, and lower scores in reading, math, and spelling⁽¹²⁾.

What are the main suggestions about marijuana for obstetricians to consider?^(8, 12)

1. Reproductive age woman should be assessed regarding illicit drug use, including marijuana, during pre-conception, antenatal care, and postpartum. Obstetricians should inform them to discontinue such drug use because it can potentially harm themselves and their babies. They should also be reassessed at each visit regarding potential illicit drug use.

2. Marijuana is not recommended to treat morning sickness or other medical indications during pregnancy⁽¹³⁾.

3. Smoking marijuana may increase the level of maternal serum carbon monoxide and decrease the amount of oxygen delivered to the baby⁽¹⁴⁾.

4. Pregnant marijuana users tend to have adverse socioeconomic conditions more often, such as poverty, malnutrition, experience of partner violence, and are less likely to take folic supplements⁽¹⁵⁾. Proper support and supplements may be warranted.

Conclusion

Thai obstetricians should be alert about the use of marijuana in clinical practice by patients, who may be increasingly exposed to marijuana after the recent announcements about changes in the marijuana law in Thailand. Patients should be informed about the potential harm to the mother and fetus during pregnancy and should be advised to avoid using it.

Potential conflicts of interest

The authors declare no conflicts of interest.

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