



With the legalisation of medical marijuana overseas, the use of this drug has been hotly debated globally. We interview three specialists for their personal take on the potential benefits of marijuana use in their respective specialties.

PROFILE



TEXT BY

DR RAVINDRAN KANESVARAN

Dr Ravindran Kanesvaran is a medical oncologist at the National Cancer Centre Singapore who specialises in GU oncology and has an interest in Geriatric Oncology. He is currently the President of the SSO (not the great Singapore Symphony Orchestra but the lesser known Singapore Society of Oncology).

DR RAVINDRAN KANESVARAN (ONCOLOGIST)

Marijuana (also known as cannabis) is a plant grown in some parts of the world for its medicinal value and oftentimes, consumed recreationally for its psychotropic effects. Its use for medicinal purposes dates back more than 3,000 years. The cannabis plant produces a resin containing psychoactive compounds called cannabinoids. The highest concentration of cannabinoids is found in the female flowers of the plant. Clinical trials conducted on medicinal cannabis are limited. The US Food and Drug Administration (FDA) has not approved the use of cannabis as a treatment for any medical condition. However, FDA has approved two cannabinoids (dronabinol and nabilone) for use in chemotherapy-induced nausea and vomiting (CINV).

Marijuana has been found to have a number of medicinal uses. In oncology, its main indication overseas has been in CINV. There have been three small studies using cannabis for this purpose and only one of the three showed any benefit when compared to placebo. As far as I know, there is no data to support its use for other cancer-related symptoms such as pain or poor appetite.

I believe that there are better ways to cope with the stressful living in Singapore than to resort to the recreational use of marijuana. There are very few pros to medical marijuana. We have so many good antiemetics for CINV that there is little reason to consider using marijuana or cannabinoids. I can only see housing agents benefitting from this, because if it is approved, it may boost the rental market as people rent spaces to grow the plant. My main concern is that marijuana may become the drug of choice for abuse even if it's strictly regulated.

As mentioned above, with the new generation of antiemetics for CINV, there is little role for medical marijuana use for the patients I treat in oncology. There is also limited data for its use to treat other cancer-related complications.

DR ADRIAN WANG (PSYCHIATRIST)

I think the evidence base for the medical use of marijuana remains limited. While it may help in pain control and nausea, its effects remain unpredictable and it's difficult to decide if the benefits outweigh the risks. The risks are that it can trigger psychotic reactions and may cause cognitive and memory impairments. There is also a possible link between

cannabis use and schizophrenia in young people.

I am also worried that some people may use medical marijuana as an excuse for recreational use. Some people may think that recreational use of marijuana is harmless, but its long-term effects have not been fully evaluated. In addition to the adverse effects I have mentioned, there is some evidence that long-term use can lead to dependency, chronic states of intoxication, and cardiac and respiratory problems. There is also the possibility that marijuana may be a "gateway drug" that can lead people to experiment with harder drugs such as cocaine and amphetamines.

The pros of medical marijuana are that for a selected group of patients, such as those with cancer or chronic pain conditions, it may alleviate suffering. We will also need a new set of prescribing guidelines to provide doctors with a framework on prescribing it safely.

Although there are some evidence that marijuana may help with depression, anxiety and bipolar disorder, these are not strong evidence. The risks may outweigh any potential benefits. Thus for now, I cannot think of any strong compelling reason to use it in the patients I treat.

**DR ALEX YEO
(PAIN SPECIALIST)**

The recent interest for wider access to cannabis or cannabinoids as analgesic in chronic painful conditions seems to be logical. It is true that the human body contains cannabinoid receptors in the central and peripheral nervous system, although the functions of these receptors and their endogenous ligands may still be unclear. The debate on legitimising the use of both the natural chemicals that act on cannabinoid receptors and synthetic cannabinoids has been ongoing for many years. In Britain, doctors used to prescribe cannabis. In a survey conducted in 1994, 74% of UK doctors indicated that cannabis ought to be available on prescription. To date, the synthetic, nabilone, is the only legally available cannabis preparation in the UK. It is licensed solely for use in nausea and vomiting induced by chemotherapy. Recreational smoking of cannabis in the 20th century and the consequential restrictive federal legislation have functionally ended all medical use of marijuana. Overall,

I feel that evidence of the benefits of medical marijuana, even in the areas of pain management, remain limited.

The most prominent effects of marijuana are mediated by receptors in the brain. Acute intoxication is characterised by euphoria, loss of short-term memory, stimulation of the senses and impaired linear thinking. Adverse effects include depersonalisation and panic attacks, while common physical effects include increased heart rate and reddened conjunctivae. Use of marijuana in chronic, high doses may cause subtle cognitive impairments that appear to be long-term, though the duration of impairment is unknown. Marijuana use may be a risk factor for the development of cognitive impairments in individuals with underlying mental illness. Although marijuana causes dependence, the addictive power and withdrawal symptoms produced are mild compared to cocaine, alcohol, heroin and nicotine.

With relevance to my practice and as evidenced in animal testing, cannabinoids reduce hyperalgesia and allodynia associated with formalin, capsaicin, carrageenan, nerve injury and visceral persistent pain. Two obvious targets are spasms in multiple sclerosis and resistant neuropathic pain. The dose administered should be the minimum quantity, repeated four or six hourly and gradually increased until relief is attained.

According to FA Campbell's study on the effectiveness of cannabinoids in pain management, the best analgesia achievable with single-dose cannabis in nociceptive pain is equivalent to single-dose codeine 60 mg, which rates poorly on relative efficacy compared with non-steroidal anti-inflammatory drugs or simple analgesics. However, raising the cannabinoid dose to increase the analgesia would result in more adverse effects. Compared with the relatively negative analgesic results in nociceptive pain, the suggestions of cannabinoids' efficacy in spasticity and neuropathic pain are perhaps more intriguing, as the therapeutic need in these areas is greater than in postoperative pain. To date, there is insufficient evidence to support the introduction of cannabinoids into widespread clinical practice for pain management, although the absence of evidence of effect is not the same as the evidence of absence of effect. ◆

PROFILE



TEXT BY

DR ADRIAN WANG

Dr Adrian Wang received his MBBS from the National University of Singapore in 1990 and Master of Medicine (Psychiatry) in 1996. He has also received training in the treatment of bipolar disorders at Stanford University. Before commencing private practice at Gleneagles Medical Centre in 2005, he was Chief of the Department of General Psychiatry at the Institute of Mental Health, and the Chief CARE Officer of the National CARE Management System. His main area of specialty is the treatment of mood and anxiety disorders.



TEXT BY

DR ALEX YEO

Dr Yeo Sow Nam is Director of The Pain Specialist, Mount Elizabeth Hospital. He was trained at the Prince of Wales Hospital, Sydney and was the first in Singapore to obtain accreditation in the pain management specialty, awarded by the Australian and New Zealand Faculty of Pain Medicine. He was the first Fellow of Interventional Pain Practice (USA) in Singapore.

My special thanks to Ms Mabel Poon Lee Shin, my clinic manager, for her kind assistance in preparing this article.