

## Cannabinoid Hyperemesis Syndrome in an East Indian: The Case for Genetic Susceptibility

The Editor,

Sir,

Following the first description of Cannabinoid Hyperemesis Syndrome (CHS) in 2004, there have been hundreds of cases reported, up to recently. One of the largest series was at the Mayo Clinic (a non-profit organization in the United States of America) where five African-American patients, three Hispanics and 12 patients of 'Other' ethnicities were noted in a series of 98 cases of predominantly Caucasian patients (1, 2).

In the West Indies, where cannabis use is common, only one case (a Caucasian male) from Trinidad and Tobago and one of unknown ethnicity from Puerto Rico had previously been reported; surprisingly, there was none from Jamaica, a country noted for cannabis use (3, 4). We have not found reports from Africa or India or other populous Asian countries, though lack of recognition or under-reporting may exist. We describe a case in a man of East Indian descent, a resident of south Trinidad.

In August 2017, a 33-year-old male presented to our facility with a one-day history of abdominal pain, colicky in nature. This was associated with non-bilious vomiting (approximately 10 episodes), retching, diarrhoea (five episodes) and bifrontal headache. These symptoms had been recurring cyclically every one to two months for the previous year, with each episode lasting one to two days. He revealed heavy marijuana use for 11 years: 15–20 'joints' per day. He was also a smoker of 11 pack-years and had occasional alcohol consumption. A significant weight loss of 47 pounds over the previous year was reported. Physical examination, blood pressure and other vital signs were normal. His blood investigations including complete blood count, renal and hepatic function, rapid HIV, helicobacter pylori serology, lipid profile, fasting blood glucose and hepatitis B and C screen were non-contributory. A chest X-ray and abdominal ultrasound revealed no abnormality. He previously had an upper gastrointestinal endoscopy, with a hiatal

hernia as the only positive finding. Urine was positive for marijuana. The patient reported some relief of symptoms with taking a hot shower. Over the next 24 hours, he was given pain relief and intravenous fluid resuscitation. His symptoms resolved the following day. Of note, he had no access to marijuana during hospitalization. A diagnosis of CHS was made, and he was counselled on cessation of cannabis use. Two months after discharge, he reported a significant improvement in symptoms with no recurrence of episodes. However, he did not cease marijuana use, but significantly reduced usage to one to two 'joints' per day.

It is well recognized that genetic differences may explain why some populations are vulnerable to toxicity by some pharmaceuticals, and this fundamental principle currently guides drug use in clinical practice. The genetic predisposition to psychosis with cannabis use has been confirmed by many studies (5). We hypothesize that the same principle may be operative in CHS where the reported cases are predominantly Caucasians. By this report, we wish to alert physicians to this syndrome and await reports from other ethnic populations so that firm conclusions on genetic susceptibility can be elucidated and guidance on future pharmacotherapy can be fashioned.

**Keywords:** Cannabinoid Hyperemesis Syndrome, cannabis, genetic susceptibility

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