CASE REPORT

Cannabis as a Risk Factor for Persistent and Severe Depression: A Case Report

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Abstract

Evidence linking cannabis use and depression remains inconsistent. Variations of clinical features were observed in those with history of cannabis use presented with affective symptoms. We report a case of a 19-year-old male college student with a history of heavy cannabis use for at least seven months. A month after stopping cannabis, he presented with severe persistent depressive symptoms. He had no withdrawal symptoms prior to this. He had severe depressive symptoms with melancholic features and progressed to multiple and serious suicidal attempts. While the use of cannabis is implicated in neither the patient’s diagnosis nor management, its use has a significant role in influencing the clinical features and course of the illness. This case suggests that depression can start long after cessation of cannabis use with the history of cannabis remained as a significant risk factor.

Keywords: Cannabis, Depression, Suicidal Attempt

Introduction

Cannabis is one of the most widely used drug and very popular among young people. The users take it for its euphoric effect and the belief that it is fairly safe. There is consistent evidence that cannabis use is associated with psychosis but for affective disorders there is still little evidence.

Clinical features observed in those with history of cannabis use presented with affective symptoms vary. Apart from that, co-morbidity between cannabis use and depression is characteristically described in combination with other substances but uncommon with cannabis alone. Studies suggest the association is mainly between heavy use of cannabis and depression.

Our case suggests cannabis as a risk factor of a case of severe depression with onset after cessation of the drug.

Case Report

A 19-year-old male university student presented to our centre with a suicidal attempt and a two-month history of depressed mood. He has a history of smoking cannabis for 7 months after being introduced to the substance by his college friends. During this time, he initially smoked 2 to 3 sticks each time for once or twice a
week but the frequency increased to 2 to 3 sticks daily when he moved into a rented house where they were all cannabis smokers. He smoked cannabis to enjoy the euphoric effect and did not experience any psychotic or unpleasant symptoms. He did not abuse other illicit substances or alcohol. Out of his own conscience, he quite suddenly decided to stop the cannabis use. He had no withdrawal symptoms after he stopped taking cannabis “cold-turkey” and he was still able to function at this time.

However, about 3 weeks later, he started to develop the depressive symptoms. Beside feeling depressed, he had poor appetite, loss of weight, anhedonia, poor sleep and poor concentration. Subsequently, he no longer went out with his friends, neglected his duty as a Muslim (e.g. not performing daily prayers) and performed badly in his studies. There was ruminating thought and excessive guilt on his past use of cannabis. No other stressors were elicited. He also had early morning awakening, feeling of hopelessness and worthlessness that led him to attempt suicide.

He moved out from his rented place in the university and stayed with his father. His depressive symptoms continued to worsen. He neglected his hygiene, his verbal response became monosyllabic and he continued to have suicidal thoughts. He was diagnosed with Major Depressive Disorder with melancholic features. After being started on antidepressant and a benzodiazepine (up to fluvoxamine 100mg nocte and lorazepam 1mg nocte) by a psychiatrist at another hospital, he continued to have suicidal ideation and attempted suicide twice before he was brought by his family for admission to the psychiatric ward at our centre.

He has a genetic predisposition for depression where his maternal aunt suffers from depression. He is the eldest child in the family. His parents were divorced when he was 12 years old, nevertheless the history suggests a well-adjusted child with no history of childhood depression or neurosis. Pre-morbidly, he is an independent, cheerful, easy-going person with some perfectionist trait. Mental state examination on admission revealed a thin young man with uncombed hair, minimal eye contact and downcast gaze. He had no psychomotor retardation but appeared depressed with passive suicidal ideation. His judgment was impaired and he had poor insight of his illness. Physical examination and laboratory investigations including urine drug toxicology test were negatives.

**Discussion**

Withdrawal from cannabis have been established and shown to be similar to many other substances where it peaks at day 2-4 and lasted about 2 weeks. The symptoms include irritability, mood changes, appetite disturbance, weight loss and difficulty sleeping. However, not everyone will suffer from withdrawal symptoms and this patient is one of them. He did not develop any depressive symptoms during his heavy use of cannabis or during the withdrawal period but instead the symptoms appear nearly a month after cessation. Studies of the cannabinoid system suggest that cannabis and its major psychoactive component delta-9-tetrahydrocannabinol may have a role in modulation of mood and anxiety. This may suggest that when the patient suddenly stopped using cannabis, it caused a dysregulation of the cannabinoid systems and contributed in developing the depressive symptoms.
Despite the cannabis use, this patient already has risk factors that predispose him to the illness such as family history of depression and parental divorce. Another possible explanation is based on the “common liability model” which suggests that cannabis and depressive symptoms are associated by an underlying risk factor. A recent study suggests low self control as the predictive risk factor for cannabis use and depressive symptoms\(^6\), which may be implicated in this case. The severity of the symptoms with melancholia and multiple suicidal attempts which developed after cessation of cannabis suggest that cannabis may be a contributing factor. This is supported by studies that found higher rates of suicide among drug users with depression\(^7\).

Management of this patient required hospitalization due to his high risk of suicide. Antidepressant was given but a psychotherapy approach may be useful for this patient as his psychosocial issues must be addressed and assessment of his coping skills may prove to be beneficial in his journey to recovery.

**Conclusion**

While the use of cannabis is implicated in neither the patient’s diagnosis nor management, its use has a significant role in influencing the clinical features and course of the illness as illustrated by this case. The association with depression and suicidal ideation has been shown with heavy regular use of cannabis, but this case suggests that depression can start long after cessation of cannabis use with the history of cannabis use remained as a significant risk factor.

**References**


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