Persistent Psychosis Induced by Cannabis Withdrawal

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Cannabis, also commonly known as marijuana or weed, is a psychoactive substance derived from the *Cannabis sativa* plant. Its use is associated with various physical and psychological effects. The primary psychoactive compound in cannabis is delta-9-tetrahydrocannabinol, which interacts with the brain's endocannabinoid system, regulating various physiological and cognitive functions.[1] While cannabis is known for its euphoric and relaxing effects, it can also induce psychotic effects in susceptible individuals.[2]

Significant reduction or sudden abstinence from heavy and prolonged cannabis use may precipitate cannabis withdrawal syndrome. Symptoms typically appear within 24 to 72 hours after the last use and can last for about 1 to 2 weeks. Common symptoms of cannabis withdrawal include irritability, anxiety, sympathetic autonomic hyperactivity, stomach pain, tremors, sleep disturbances, fever, chills, reduced appetite, restlessness, and headache.[3] In some cases, particularly in individuals with a history of heavy and prolonged use, withdrawal can also trigger psychotic symptoms.

Although cannabis-induced psychosis is commonly encountered in clinical practice and described in the literature, cannabis withdrawal psychosis is rarely reported. Here, we describe a case of cannabis withdrawal psychosis and its management.

Case Report

A 36-year-old married man presented to the psychiatry outpatient department with complaints of suspiciousness, irritability, and reduced sleep for more than 2 months. The symptoms began within 3 days of stopping heavy marijuana use, which had been ongoing for more than 1.5 years. The patient reported smoking approximately 2 g of marijuana per day. He experienced suspiciousness, believing that his colleagues were planning to harm him and unknown individuals were following him wherever he went. There were no symptoms indicative of manic or depressive episodes. The patient had no history of psychiatric illness. He reported no misuse of substances other than nicotine. The patient's paternal uncle had a history of bipolar affective disorder. There was no history of any comorbid medical illnesses. Physical and basic laboratory examinations were within normal limits. The mental status examination revealed an anxious affect and paranoid delusions. The patient was diagnosed with cannabis withdrawal psychosis. Oral risperidone 1 mg per day was initiated. The patient's symptoms completely resolved within 2 weeks of starting the medication.

Discussion

Cannabis withdrawal is dependent on the amount of consumption precessation, as well as gender, genetic, and environmental factors. Besides the physical signs, the psychiatric symptoms also have been described in the literature. However, psychiatric manifestations are still an infrequent and misunderstood phenomenon.[4–6]

We conducted a database analysis of literature published in PubMed using the search keyword *cannabis withdrawal AND psychosis*. No specific time interval was applied in the literature search; however, the search was limited to only English-language publications. We identified 11 cases related to cannabis withdrawal psychosis, the characteristics of which are shown in Table 1. The age range of the patients was 19–47 years, with all being male, except for 1 female case. The time from cessation to the onset of psychosis ranged from 2 to 20 days, with most cases occurring within 1 week of stopping cannabis use.

There was no significant difference regarding the role of past psychosis history, as the results showed that both cases with and without a previous history of psychosis were almost equally likely to present with withdrawal psychosis. Similar to our case, the most common presenting symptoms upon withdrawal were delusions, particularly paranoid delusions, along with disorganized speech and behavior in some cases. Some patients also exhibited hallucinations, suicidal ideation, and affective symptoms.

Unlike our case, most of the patients responded to higher doses of second-generation antipsychotic medication. However, our patient became symptom-free with a low dose of risperidone (1 mg for 2 weeks).

Analysis of the characteristics of these cases shows that most instances of cannabis withdrawal psychosis are characterized by heavy and prolonged use of cannabis prior to cessation. Most of the cases with similar presentations were young adults, with onset occurring within 1 week following cessation. We obtained similar results in our case as well. Another important aspect to keep in mind in such clinical scenarios is the potential role of the adulteration of the cannabis in precipitating the psychotic episode.

Table 1.

Summary of Published Reports on Cannabis Withdrawal Psychosis

Author	Age/ sex	Past psychosis history	Time from withdrawal to psychotic onset, d	Major presenting symptoms	Use pattern	Pharmacologic agent used for treatment
Ramos et al[7]	32 y Male	Yes	2	Persecutory delusions and disorganized speech	2 g/d for last 15 y	Aripiprazole 15 mg/d and diazepam 5 mg/d
Kung et al[8]	25 y Male	No	10	Self-harm persecutory delusions, auditory and visual hallucination	Continuous use of marijuana and cannabis oil electronic cigarette for 2 y	Brexpiprazole 3 mg/d
Cohen et al[9] (8 patients)	47 y Male	Yes	6	Paranoid delusions, suicidal ideation, and anxiety	1 g/d for 7 y	Quetiapine and aripiprazole
	26 y Male	Yes	6	Self-talkative, wandering, logorrhea, and mutism, alternatively, posturing and perplexity	Data not available	Olanzapine 10 mg/d
	19 y Male	No	7	Disorganized behavior, affective lability, paranoid ideation, grandiosity, affective lability, decreased need for sleep, and increased activity	Data not available	Olanzapine up to 25 mg/d
	19 y Male	No	<7	Self-talkative, paranoid delusion, referential delusion, aggression, and disorganized activities of daily living	1 g/d for 1 y	Aripiprazole 5 mg/d
	20 y Male	No	7	Paranoid delusions, persecutory ideas, thought disorganization, and thought blocking	1–2 g/d for more than 6 mo	Olanzapine 10 mg/d
	26 y Male	Yes	6	Disorganized speech and behavior, aggression, and agitation	4 g/d for 4 y	Olanzapine 5 mg/d
	23 y Female	Yes	20	Disorganized behavior, aggression, auditory hallucination, and grandiose delusion	Daily use for 7 mo	Olanzapine 15–20 mg/d
	20 y Male	No		Auditory hallucination, paranoid delusion, suicidal thought, and aggression	Used for several months	Risperidone 3 mg/d switched to paliperidone 150 mg depot at discharge
Marín et al[10]	29 y Male	No	7	Persecutory delusion and overspending	10 standard joint units/d since adolescence	Olanzapine 10 g/d
Vaseel and Uvais, 2025	36 y Male	No	3	Paranoid delusion	2 g/d for 1.5 y	Risperidone 1 mg/d

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