

“Poison Cures Poison”!?! -A Case Report of Cannabis Induced Late-Onset Psychotic Disorder Well Managed with *Cannabis Indica*.

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ABSTRACT

Background: Cannabis is the most commonly abused substance globally and presents a serious personal and public health problem. Homoeopathy has proven effectiveness in some substance abuse disorders.

Objectives: To assess the usefulness of *Cannabis indica* in Cannabis Induced Late Onset Psychotic disorder (CILOPD).

Material and methods: A case presenting with symptoms of CILOPD was assessed with BPRS at baseline and treated with *Cannabis indica* 200 in IPD. The changes were assessed over a period of 1

month and was observed for a year. **Results:** The BPRS score at baseline of 47 turned to 20 at the end of 1 week and 18(Normal) at the end of 2 weeks. There was no relapse of psychotic symptoms for one year. He

is off from cannabis with good psychosocial adaptation. **Conclusion:** *Cannabis indica* is useful in management of Cannabis related disorder. The hypothesis of “*Poison cures Poison*” is an arena of future research.

KEY WORDS: Cannabis induced late onset psychotic disorder, Homoeopathy, *Cannabis indica*, Cannabis Use Disorder Identification Test (CUDIT), Brief Psychiatric Rating Scale (BPRS).

INTRODUCTION

Cannabis abuse is a term describing the continued use of cannabis despite impairment in psychological, physical, or social functioning. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) has revised the terms of Cannabis Use Disorder (CUD) defined by nine pathological patterns classified under impaired control, social impairment, risky behavior or physiological adaptation. (1)

Cannabis induced psychotic disorder is a cluster of psychotic phenomena that occur during or immediately after cannabis use and are characterized by vivid hallucinations, misidentifications, delusions and/or ideas of reference, psychomotor disturbances (excitement or stupor), and an abnormal affect, which may range from intense fear to ecstasy. It is included under subsection, “psychotic disorder” of “Mental and Behavioural disorder due to psychoactive substance use” in ICD 10.(2) Whereas fifth edition of Diagnostic statistical manual of mental disorders describes it under subsection, “Substance/medication induced psychotic disorder” of “Schizophrenia spectrum and other psychotic disorder”.(3) . Late-onset psychotic disorders (with onset more than 2 weeks after substance use) may occur and should be coded as F1x.75. (2)

Cannabis is the most commonly used substance of abuse globally after alcohol and tobacco. (4) The prevalence of 12-month and lifetime DSM-IV cannabis abuse in a study conducted in USA are 1.1% and 7.2% respectively. (5) There is an increasing prevalence in cannabis use in the past few decades. In 2014, a total of 2.5 million persons aged ≥ 12 years had used marijuana for the first time during the preceding 12 months, an average of approximately 7,000 new users each day. (6) A Meta-analysis showed that among people who used cannabis, 22% (18-26%) have cannabis use disorder (CUD), 13% (8-18%) have cannabis abuse (CA), and 13% (10-15%) have cannabis dependence (CD). Estimates from cohort studies, showed that the risk of developing CD increased to 33% (22-44%) among young people who engaged in regular (weekly or daily) use of cannabis. (7) The incidence of cannabis-induced psychotic disorder is thought to be 2.7 per 100,000 person-years, with a conversion rate to a schizophrenia-spectrum disorders ranging between one-third and one-half. (8)

Cannabis is considered by the Food and Drug Administration, along with heroin and peyote, as a schedule I drug.(1) Medicinal effect of cannabis is well known for its use since ancient times in gout, arthritis, pain, burns, hard tumors, sexually transmitted diseases, difficult labors and infection.(9) Currently it is used to treat various disorders such as nausea secondary to chemotherapy, multiple sclerosis, chronic pain, AIDS, epilepsy and glaucoma.(10) There is evidence for a role of the endocannabinoid system in the control of emotional states, and cannabinoids could prove useful in decreasing and palliating post-traumatic stress disorder symptoms and anxiolytic disorders. The role of the endocannabinoid system in addictions has been examined, and cannabinoids have been postulated as alternative and co-adjuvant treatments in some abuse syndromes, mainly in ethanol and opioid abuses. (11)

Cannabis exposure is related to neuroanatomical changes in brain regions rich in cannabinoid receptors, such as the hippocampus. (12) Cannabinoids appear to increase the release of dopamine in the nucleus accumbens, a key reward area of the brain implicated in addiction. Heavy use of cannabis can produce psychotic symptoms in individuals with no prior history of psychiatric disorder. (10)

The relationship between cannabis use and psychosis may be bidirectional, highlighting the need for early intervention programs to target cannabis use and psychotic symptom severity in this population. (13)

There are few studies to show effectiveness of homoeopathic medicines in Substance abuse disorders like alcohol dependence, alcohol withdrawal, cocaine abuse and tobacco abuse. (14)(15)(16)(17) As per the authors' knowledge, till date there is no literature available in peer reviewed journals to show the usefulness of Homoeopathy in the management of Cannabis related disorders.

The very idea of writing this case report came from our experience with a case of Cannabis use disorder well managed with homoeopathic preparation of *Cannabis indica* which lead us to suggest a hypothesis that the behavioral syndromes associated with substances abused can be managed with ultra-high dilutions of medicinal substances prepared from the same narcotic substance. The role of ultra-high dilutions of Cannabis in the management of Cannabis abuse has been put forward through this case.

CLINICAL CASE REPORT

Client information: Mr. MK, 28 years old male patient, a manual laborer was brought by his parents to Psychiatry OPD of National Homoeopathy Research Institute in Mental Health, Kottayam on 7th October 2019.

Presenting complaints: Sleeplessness, loquacity, anger and irritability, suspicious that his family members are against him, desire for adventurous activities and destructive tendency which started in the past 15 days. He is having irresistible craving for cannabis and was addicted to it since the age of 20 years. He has destructive tendencies; destroyed household articles like 1 cupboard and 3 mirrors. So, he was brought to the hospital by his mother, father and brother. The informants were his own parents; hence the information is reliable. As per the parent's report, the patient was abstinent from Cannabis for the past two weeks.

History of present illness: His cannabis use started 8 years back when he used to take this occasionally along with his friends for recreation. Later it became habit and for the past 5 years he is smoking cannabis on a regular basis. He was working as manual laborer during that time, but because of this habit he became irregular in job. He used to feel lazy to go for job. He used to spend most of the time with his friends for smoking cannabis, tobacco and also for taking alcohol. He used to make quarrels with his family members under intoxication.

Past history: He had history of chickenpox during childhood. He has a strong family history of psychiatric illness. His father and mother are psychiatric patients and are taking psychiatric medications. Father has bipolar disorder and mother has Depressive disorder. His maternal uncle committed suicide.

Life space investigation: His father used to become violent frequently and abuse MK verbally and physically. So, he had fear of father since childhood. He was average in studies up to 10th standard and had to quit education because of family issues. He was upset with his life and started taking cannabis and alcohol. He then started working as a manual laborer.

Premorbid personality: as the patient was under intoxication nothing specific could be elicited in the first interview except that he was very social and had many friends, he has high self-esteem and expects others to obey him always, as mentioned by the parents.

Physical generals: He has good appetite, increased thirst for cold water, desire for pungent things and fish, profuse perspiration especially of scalp. Thermally he is hot.

Physical examination: the patient is moderately built, well-nourished and vitals are normal. Nothing abnormal was detected on general physical examination.

Mental Status Examination

General Appearance & Behavior: Conscious, uncooperative, Eye to Eye Contact is maintained, rapport is established, over talkative, restless, not neatly dressed. **Psychomotor Activity:** increased; **Speech:** relevant, rate: increased, volume: increased, reaction time: normal, tone: normal. **Affect:** appropriate, reactive, average range, stable and congruent. **Mood:** Subjective: irritable; Objective: irritable. **Thoughts:** Flow: increased; Form: Normal; Content: Delusion of grandiosity; Delusion of persecution, thinks his parents are trying to harm him. Possession: nil. **Perceptual Disorder:** Hallucinations: Nil; Illusions: Nil. **Orientation to:** time, place and person: present. **Memory:** Immediate: - good; Digit Forwards: - good; Digit Backwards: - good; Recent: - Good Remote: good. **General information and Intelligence:** good. **Attention& Concentration:** Poor, could not subtract 7 from 100. **Abstract thinking:** Poor. **Judgement:** (a) Social judgement: Poor; Test judgement: intact. **Insight:** Complete denial of illness.

The case was screened with Cannabis use disorder identification test (CUDIT) and the total score was 14, hence the case is identified as Cannabis Use Disorder. Mr. MK was smoking Cannabis around 2-4 times a month with being “stoned” for 3-4 hours on a typical day when he used cannabis. His daily activities were going on well but his occupation was adversely affected because of Cannabis abuse. At the time of presentation, there were few psychotic symptoms hence assessed with BPRS at baseline and every day until the time of discharge.

Diagnosis: *Cannabis Induced Late Onset Psychotic Disorder* (ICD 10- F12.75)

Intervention: Mr.MK was admitted in In-Patient unit under Psychiatry department with the consent of the parents. Since the patient was irritable and uncooperative, it was difficult to get the complete picture of the case. So, *Cannabis indica* 200 – 1 dose was given on the same day of admission based on the loquacity and long history of Cannabis abuse.

RESULTS

The BPRS total score at baseline of 47 turned to 20 at the end of 1 week with remarkable improvement of the symptoms of the patient. As there was aggravation followed by amelioration after 1 week, so *Cannabis ind 200 C* was repeated and BPRS score turned to 18(Normal) at the end of 2 weeks. The changes in BPRS over a period of 1 month are graphically represented in Figure no.1. A dose of *Sulphur 200 C* was given as an antipsoric during 4th week to prevent any relapse of craving for cannabis or psychotic episode. The rubrics considered for constitutional prescribing and repertorial totality are shown in Figure no.2. Sulphur was selected based on the marked haughty disposition and warm bloodedness of the patient. After that the patient was discharged and observed with a monthly review in the OPD. The follow up of the case has been shown in table no.1. There was no relapse of psychotic symptoms for one year and the client is off from cannabis and other stimulants since then with good psychosocial adaptation.

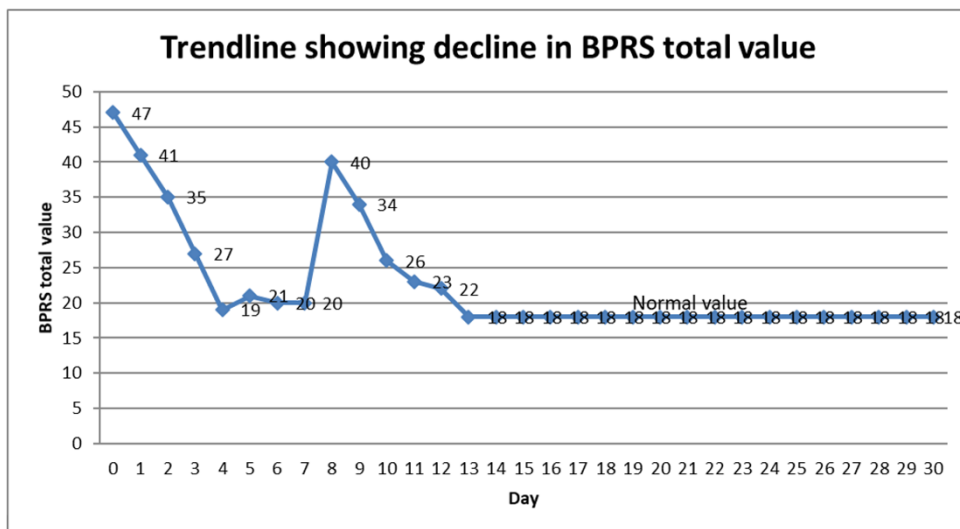


Figure no.1- Changes in BPRS Scores

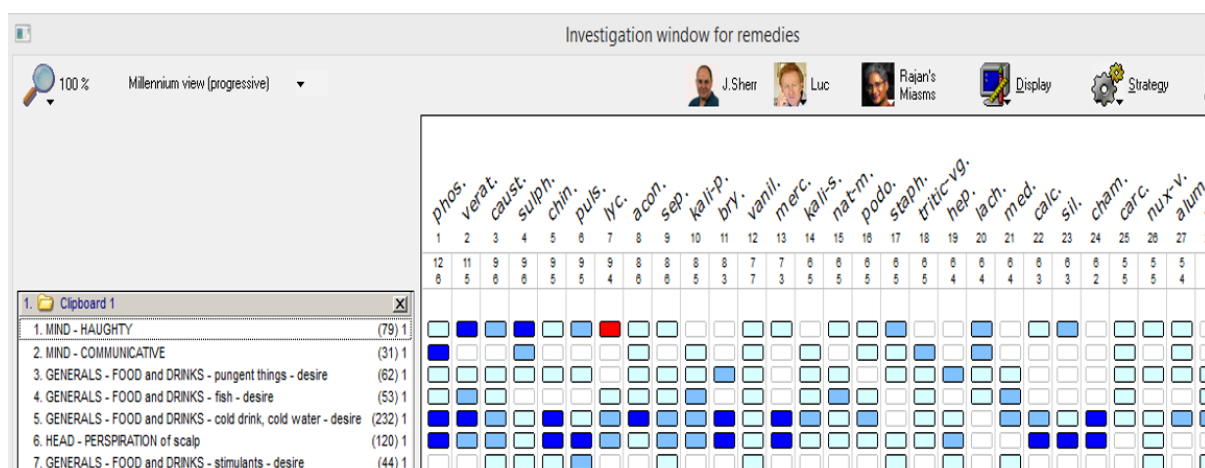


Figure no.2 - Repertorization chart

Table no.1- Follow up of the case

S.No	DATE	OBSERVATION	PRESCRIPTION
1	07/10/2019 (baseline)	Sleeplessness, loquacity, anger and irritability, desire for adventurous activities, grandiose talks and destructive tendency, suspicious that his family members are against him, irresistible craving for cannabis.	<i>Cannabis indica 200/1 dose</i>
	08/10/2019	Irritability reduced, sleep improved, grandiosity reduced, suspiciousness persists, craving for cannabis persists	<i>Sac lac</i>
	09/10/2019	Irritability reduced, sleep improved, grandiosity and suspiciousness reduced	<i>Sac lac</i>

	15/10/2019	Loquacity, slept up to 3 am, restless after that, grandiose talks, changeable mood, boasting, craving-reduced	<i>Cannabis indica 200 /1 dose</i>
	21/10/2019	Sound sleep, grandiosity reduced, irritability reduced, craving-nil, suspiciousness- nil	<i>Sac lac</i>
	28/10/2019	Sound sleep, grandiosity reduced yet haughty, no irritability, hasty speech,	<i>Sulphur 200/ 1 dose</i> <i>(Anti-psoric)</i>
	05/11/2019	Irritability absent, hasty speech, no grandiosity, wants to go for job.	<i>Sac lac</i>
	9/11/2019	Loquacity reduced, grandiosity absent, good sleep, no irritability	<i>Sac Lac. Discharged</i>
	23/11/2019	Loquacity reduced but hurried speech, haughty attitude. going for job, not using stimulants, good sleep	<i>Sulphur 200/ 1dose</i>
	14/12/2019	going for job regularly, not using stimulants, Generals – good	<i>Sac Lac- 1 month</i>
	20/5/2020	Telephonic follow up: off from cannabis and alcohol completely, going for job regularly, generals: good	
	19/10/2020	Telephonic follow up: not using any stimulants, going for job regularly, generals: good	

DISCUSSION

Cannabis indica is indicated in conditions like excessive loquacity; exuberance of spirits. Constantly theorizing. Mania, must constantly move. Emotional excitement; rapid change of mood. (18) Incoherent talking. Uncontrollable laughter. Inability to fix his thoughts on one subject. Great agitation. (19) On the basis of above symptoms *Cann ind* is prescribed to the patient in a non-repertorial approach by referring to *Materia medica*.

A study shows that heavy cannabis use in early adulthood is a risk factor for a greater rate of decrease in the volume of the right hippocampus (particularly the right CA1). (12) Hence, measures should be taken to abate the effects in young adults. Management of psychotic episode as well as prevention of relapse of Cannabis abuse could be achieved in this case (age-28 years) through Homoeopathy.

Chronic effects of cannabis use include mood disorders, exacerbation of psychotic disorders in vulnerable people, cannabis use disorders, withdrawal syndrome, neurocognitive impairments, cardiovascular, respiratory and other diseases. (20) Tobacco and alcohol consumption, and particular lifestyles and behaviors are often associated with cannabis use. Some traits predispose individuals to the use of psychoactive substances in general. (21) The current case has associated alcohol and tobacco abuse also showing that he has a predisposition to become addictive. The client could overcome Cannabis as well as alcohol and tobacco dependence with the help of the constitutional remedy, *Sulphur*.

There are multiple mechanisms of treatment of cannabis use disorder including behavioral therapy management and emerging data on treatment via pharmacotherapy. (22) Constitutional homeopathic treatment will act skillfully on the person's inherent nature, molding and harmonizing the person's self-energy to control the life situations. Constitutional homeopathic treatment along with proper counselling and psychotherapy will help address any related medical, psychological, social and cognitive problems. (23)

In previous studies on substance abuse most of the cases were treated with individualized homoeopathic medicine. Selection of individualized homoeopathic medicine may not be always easy because of the limitations in selecting similimum during states of intoxication. Sometimes characteristic

symptoms of the patient may be masked by the drug symptoms due to prolonged or over abuse. Therefore, other ways of prescribing should be sought for in certain cases of substance abuse. In such cases the concept of “like cures likes” may be adopted and the dynamic preparations of the same drug may be prescribed to the patient/ subjects, which have presumed beneficial effects.

Homoeopathic medicines prepared from the abused substances as per the 10th revision of ICD-10 classification of mental and behavioral diseases have been represented in the table no.2. To the authors’ knowledge homoeopathic medicines have not been prepared from hypnotics, hallucinogens and volatile substances.

Table no.2- Homoeopathic medicines prepared from the abused substances

S.No	DRUG/NARCOTIC	ICD 10	Homoeopathic Medicine
1	Alcohol	F10	<i>Alcoholus</i>
2	Opioids	F11	<i>Opium</i>
3	Cannabinoids	F12	<i>Cannabis-indica</i>
4	Hypnotics	F13	
5	Cocaine	F14	<i>Coca</i>
6	Caffeine	F15	<i>Coffea</i>
7	Hallucinogens	F16	
8	Tobacco	F17	<i>Tabacum</i>
9	Volatile solvents	F18	

A randomized, double-blind, placebo-controlled, parallel-group, eight-week pilot trial performed at the Psychosocial Attention Center for Alcohol and Other Drugs found that psychosocial rehabilitation plus homeopathic Q-potencies of opium and E. coca were more effective than psychosocial rehabilitation alone in reducing cocaine cravings. (24)

Cannabis abuse usually causes nasal congestion. In Ayurveda, it is used to treat nasal congestion (pratishyaya)(25) which is an extension of like cures likes.

Exposure to cannabinoids in adolescence confers a higher risk for psychosis outcomes in later life and the risk is dose-related. less well-characterized but perhaps clinically important, cannabinoids are also associated with acute episodes of psychosis that manifest immediately following exposure, last beyond the period of intoxication, and require clinical intervention. (26)

Recovery and long-term remission are the goals of treatment for substance use disorders, yet the majority of treated adolescents never stop using or resume using substances quickly after treatment. Thus, continuing care or recovery support services are common post-treatment recommendations for this group. (27) For this reason, constitutional, anti-psoric medicine, *Sulphur* was given in this case after initial treatment with *Cannabis indica*. Also, it is conforming with the instructions of Dr. Samuel Hahnemann regarding the treatment of acute disease in aphorism 222. [28]

Maintenance of remission is the most common outcome for individuals in remission from a CUD, hence treatment approaches may improve rates of remission of individuals with CUD. (29) Homeopathy can serve to be one of the treatment options for the same.

Cannabis use in the adolescent population poses a significant threat of addiction potential resulting in altered neurodevelopment. (22) Young adult college students in the United States are affected by marijuana liberalization trends with states that enacted recreational marijuana legislation from 2012 to 2017 evidencing for a general trend towards greater increases in marijuana use. (30) Government and Non-government organizations should take necessary measures to create awareness about harmful effects of drugs, available treatment regimens (including Homoeopathy) and rehabilitation techniques among college students.

CONCLUSION: This case report illustrates the usefulness of ultrahigh dilutions of *Cannabis indica* in Cannabis induced psychotic disorder and highlights the need to conduct research that elucidates the scope and effectiveness of Homoeopathy in Cannabis Related Disorders. Well planned studies with appropriate designs are indispensable for accepting or refuting the current hypothesis “*Poison cures poison*” in the field of narcotics.

Conflicts of interest: none declared.

Funding/ Sponsorship: nil.

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