

Cannabis-associated Emerging Psychosis Presenting with Prominent Somatic Delusions and Koro-like Symptoms: A Case Report

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ABSTRACT

Cannabis use is a recognised risk factor for psychotic disorders, particularly among young adults. We report a case of cannabis-associated psychosis in a 24-year-old man presenting with persistent somatic delusions and Koro-like symptoms. Despite normal neurological, ophthalmological, and urological evaluations, the patient developed a fixed belief of bodily “power” shifting sides, resulting in perceived genital shrinkage and significant distress. Mental state examination revealed somatic delusions without hallucinations or formal thought disorder. Treatment with risperidone and cognitive behavioural therapy led to symptom reduction and emerging insight. The uniqueness of this case lies in the predominance of culturally influenced somatic delusions resembling Koro in the context of cannabis associated psychosis, without more commonly reported psychotic symptoms such as hallucinations or persecutory delusions. This atypical phenomenology may complicate diagnosis and delay appropriate psychiatric intervention. Awareness of such unusual presentations is important for clinicians to ensure early psychiatric intervention.

Keywords: Cannabis dependence, Culture-bound syndromes, Substance use disorder

CASE REPORT

A 24-year-old unmarried male, diploma holder, employed as a skilled worker with irregular attendance at work over the preceding three months presented to the psychiatric outpatient clinic with persistent somatic complaints and unusual bodily beliefs. He has a seven-year history of daily cannabis use, around three joints per day, often mixed with nicotine and had a five pack-year smoking history. *smoking history*. Alcohol consumption started five years ago, and escalated to 180-360 millilitres/day over the two years preceding presentation. His last use of cannabis was four months prior to psychiatric presentation but was irregular on alcohol and smoking. There was no past or family history suggestive of psychiatric illness and there were no known medical comorbidities. One month before the psychiatric consultation, he developed insomnia, diffuse body pain, unilateral bodily weakness, and visual discomfort, with no other withdrawal symptoms like nausea, tremors, headache, auditory or visual disturbances. To exclude a neurological disorder, the patient underwent neuroimaging, Nerve Conduction Studies (NCS) and ophthalmological evaluation, all of which revealed no significant organic cause for the symptoms. Despite repeated reassurance from the physicians and family members, he continued to remain concerned that he was suffering from a serious physical illness and was subsequently referred for psychiatric evaluation by a neurologist.

He was initially admitted for diagnostic clarification and management of substance dependence, as patient had history of recent alcohol use along with anxiety and insomnia. Treatment was started with i.v. Thiamine 300 mg thrice daily and i.v. Multivitamin once daily, along with tablet Lorazepam 2 mg at night and was titrated based on clinical response. Clinical psychologist performed Rorschach Inkblot Test (RIBT) [1,2] for the patient which was suggestive of prodromal psychotic features. Although his sleep had improved, he continued to show excessive preoccupation with bodily sensations. After discharge, patient remained abstinent from substance use, denied craving for substances, and reported better sleep but his beliefs intensified and evolved into a fixed conviction that bodily

“power” was shifting from one side of his body to the other, and he believed that there was shrinkage of his left testis and scrotum. These beliefs were associated with marked anxiety and distress, and reassurance-seeking behaviour for somatic concerns. The symptoms closely resembled Koro, although there was no belief of imminent death. The symptoms led to significant functional impairment and social withdrawal. This was further strengthened by absence of organic aetiology as the baseline laboratory investigations and physical examinations were normal. Magnetic Resonance Imaging (MRI) of the brain and NCS did not reveal any abnormalities. Ophthalmological examination revealed no evidence of any visual pathology. Ultrasonography of the scrotum revealed normal testicular size and vascularity. The absence of objective findings despite persistent symptoms supported a primary psychiatric aetiology.

Antipsychotic treatment with Tab. Risperidone 2 mg once daily was initiated in an outpatient setting. However, owing to the persistence of symptoms and increasing distress and suicidal ideas, he was readmitted. On mental state examination, the patient was conscious and oriented, with normal psychomotor activity and coherent, goal-directed speech [3]. Affect was distressed within a restricted range. His thought content revealed prominent somatic delusions with Koro-like content, held with strong conviction and poor insight. No hallucinations or formal thought disorders were observed.

Differential Diagnosis

The diagnosis of cannabis-associated psychosis presenting with somatic delusions and Koro like symptoms was made after carefully ruling out alternate diagnoses. Differential diagnoses considered included somatic symptom disorder and somatic-type delusional disorder and schizophrenia. Somatic symptom disorder was less likely due to the bizarre, fixed nature of the beliefs. Somatic-type delusional disorder and schizophrenia were unlikely, due to the temporal association with chronic cannabis use, symptom progression which is acute in nature, lack of past and family history of psychiatric illness, significant functional decline, and partial response to antipsychotic treatment supported a diagnosis within

the psychotic spectrum precipitated or unmasked by substance use [4].

The temporal association with chronic cannabis use, progressive symptomatology, significant functional decline, and response to antipsychotic treatment supported a diagnosis of cannabis associated psychosis. Although the patient reported alcohol and nicotine use, the clinical presentation did not correlate with the intoxication or withdrawal due to these substances.

Treatment

During inpatient care, Tab. Risperidone was titrated to a dose of four milligrams daily. Non pharmacological management included cognitive behavioural therapy for psychosis, with a focus on reappraisal of maladaptive beliefs, anxiety reduction, and development of coping strategies. Patient showed betterment in terms of sleep and emotional reactivity and intensity and conviction of somatic delusions reduced. Patient expressed doubt regarding prior beliefs and was considering alternate explanations, indicating emerging insight. Psychoeducation emphasised on risks of cannabis use, importance of medication adherence, and relapse prevention strategies. Abstinence from substances was reinforced through psychoeducation and relapse prevention counselling. He was discharged with plans for continuation of pharmacological treatment, psychotherapy, and regular outpatient follow-ups. At short-term follow-up, two weeks postdischarge, patient had reported improved functioning and maintained abstinence. No adverse effects were reported or observed during the inpatient stay or follow-up.

DISCUSSION

The present case illustrates an atypical presentation of cannabis associated psychosis and underscores the complex interplay between chronic cannabis use and the emergence of atypical psychotic symptoms. The patient's symptomatology of fixed somatic delusions of genital retraction resembling Koro, alongside anxiety and functional impairment, highlights the need for clinicians to recognise culturally bound syndromes beyond their typical epidemiological contexts.

Koro is a culture-bound syndrome characterised by intense anxiety and the belief that the genital organs are retracting or shrinking, sometimes accompanied by fears of severe harm or death [5]. While classically described in South and East Asian populations, sporadic Koro-like symptoms have been reported outside epidemic settings, often in association with underlying psychiatric conditions such as psychotic and mood disorders [6].

In the present case, early nonspecific somatic complaints progressed into fixed, bizarre bodily beliefs, suggesting a transition from prodromal phenomena to a more clearly psychotic state. The content of the delusion, perceived genital shrinkage and bodily power shift, closely resemble sporadic Koro-like symptoms rather than classical Koro symptoms. Differential diagnosis favoured a psychosis spectrum disorder precipitated by cannabis use rather than somatic symptom disorder or a pure somatic-type delusional disorder. This distinction is critical, as the temporal association with chronic cannabis use, symptom progression, and partial response to antipsychotic treatment align more closely with substance-induced or substance-associated psychosis. Early recognition and integrated management with antipsychotics and cognitive behavioural therapy were associated with symptom reduction and the development of partial insight. The patient's partial improvement further supports this diagnosis and underscores the importance of integrated pharmacological and psychological treatment approaches. Though absence of hallucinations and the predominance of somatic delusions in this patient were atypical of the usual presentation of cannabis-induced psychosis, it is known that cannabis-associated

psychosis can present with unusual and unpredictable symptom profiles, ranging from mild somatic delusions to severe behavioural disturbances.

Cannabis-induced Koro has been reported in two Indian men who experienced shrinkage of the penis associated with their first consumption of the drug [7]. This case illustrates a delayed onset of symptoms with predominant anxiety of moderate intensity, similar to a case documented in Greece, where the patient had been using cannabis for the past five years, with increased consumption attributed to stressors. The presentation of this Greek patient deviated from ours as it presented as classical Koro, which is typically associated with episodes of sudden and intense anxiety characterised by the belief that the penis will recede into the body, possibly leading to death [8]. Another case of Koro-like symptoms has been reported in a migrant worker following cannabis use, but unlike the present case, the onset of symptoms was acute following intoxication [9].

This case also emphasises the clinical importance of a comprehensive assessment, including a detailed substance use history, mental state examination, and exclusion of organic causes through imaging and laboratory investigations. Early identification of prodromal psychotic symptoms, as evidenced by the RIBT findings, could facilitate timely intervention and improve outcomes.

CONCLUSION(S)

This case report underscores the critical need for clinical awareness of atypical presentations of cannabis-associated psychosis, particularly those involving culturally influenced somatic delusions, such as Koro-like symptoms. This highlights the importance of a thorough assessment to exclude organic causes and to identify prodromal psychotic features early. Integrated management combining pharmacological treatment and cognitive behavioural therapy can lead to significant symptom improvement and emerging insights. Recognising the complex interaction between chronic cannabis use and psychosis, with "culturally influenced somatic delusions", is essential for timely diagnosis and effective intervention. Further research is needed to clarify the neurobiological pathways linking cannabis use to somatic delusions and to develop optimised therapeutic strategies for these challenging clinical presentations in patients with substance induced psychosis.

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