8 Distinguishing Features of Primary Psychosis Versus Cannabis-Induced Psychosis

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As cannabis consumption rises, there has been significant emerging evidence for cannabis-related risks. Here: a comparison of the clinical features of idiopathic psychosis (eg, schizophrenia) versus cannabis-induced psychosis (CIP).
1. Toxicology

Primary psychosis (e.g., schizophrenia). Cannabis urine toxicology is sometimes positive.

CIP. A positive toxicology screen indicates a clear timeline. Time of last drug ingestion will indicate if a patient’s psychotic symptoms are closely related to cannabis intoxication/withdrawal effects.

Discussion. Clear features of CIP are sudden onset of mood lability and paranoid symptoms, within 1 week of use but as early as 24 hours after use. CIP is commonly precipitated by a sudden increase in potency (e.g., percent of THC content or quantity of cannabis consumption; typically, heavy users of cannabis consume more than 2 g/d). Criteria for CIP must exclude primary psychosis, and symptoms should be in excess of expected intoxication and withdrawal effects.
2. Frequency of use

**Primary psychosis.** Variable reported cannabis use (25% prevalence of positive cannabis urine toxicology in schizophrenia). A diagnosis of primary psychosis (eg, schizophrenia) is warranted in the absence of heavy cannabis use or withdrawal (for at least 4 weeks), or if symptoms preceded onset of heavy use.

**CIP.** Heavy cannabis use within the past month.

**Discussion.** A diagnosis of primary psychosis (eg, schizophrenia) is warranted in the absence of heavy cannabis use or withdrawal (for at least 4 weeks), or if symptoms preceded onset of heavy use. The age at which psychotic symptoms emerge has not proved to be a helpful indicator; different studies show a conflicting median age of onset.
3. Appearance of symptoms

**Primary psychosis.** Symptoms appear before heavy substance use.

**CIP.** Symptoms appear only during periods of heavy substance use/sudden increase in potency.

**Discussion.** CIP has historically been associated with fewer negative symptoms than schizophrenia; however, without a clear timeline of use, distinguishing schizophrenia from CIP may prove difficult. Clinical features of schizophrenia and CIP share many overlapping characteristics. However, compared with primary psychoses with concurrent cannabis abuse, CIP has been established to show more mood symptoms than primary psychosis.
4. Duration of symptoms

**Primary psychosis.** Symptoms persist despite drug abstinence.

**CIP.** Symptoms abate or are reduced with drug abstinence.

**Discussion.** When assessing for CIP, careful history taking is critical. Time of last drug ingestion will indicate if a patient’s psychotic symptoms are closely related to cannabis intoxication/withdrawal effects.
Primary psychosis. Antipsychotics markedly improve symptoms.

CIP. Antipsychotics may or may not improve symptoms.

Discussion. Pharmacotherapeutic interventions include the second-generation antipsychotic drug olanzapine and haloperidol. While both are equally effective, their different adverse-effect profiles should be taken into consideration when treating a patient; olanzapine is associated with significantly fewer extrapyramidal adverse effects.
6. Presentation

**Primary psychosis.** Most often presents with delusions, hallucinations, and thought disorder.

**CIP.** Often associated with visual hallucinations and paranoid ideation (e.g., features of an “organic” psychosis.

**Discussion.** While acute cannabis intoxication presents with a range of transient positive symptoms (paranoia, grandiosity, perceptual alterations), mood symptoms (anxiety), and cognitive deficits (working memory, verbal recall, attention), symptoms that persist beyond the effects of intoxication and withdrawal are better categorized as CIP, regardless of the route of administration (smoke inhalation, oral, intravenous).
7. Degree of insight

Primary psychosis. Less insight about psychotic state.
CIP. More aware of symptoms/insight about disease.
Discussion. Perhaps the most discriminating characteristic of CIP is awareness of the clinical condition, greater disease insight, and the ability to identify symptoms as a manifestation of a mental disorder or substance use. The presence of much more rapidly declining positive symptoms is another distinctive factor of CIP.
Primary psychosis. Disorganized thought form (eg, loose associations, tangential or circumstantial speech).

CIP. Thought form or more organized and sequential.

Discussion. CIP has historically been associated with fewer negative symptoms than schizophrenia; however, without a clear timeline of use, distinguishing schizophrenia from CIP may prove difficult. The role of long-term antipsychotic treatment after CIP also needs further research. Ultimately, strategies geared to prevention of CIP are critical (eg, cannabis treatment, drug use prevention).
Treatment of CIP
As with all substance-induced psychotic states, abstinence from cannabis may be the definitive measure to prevent recurrence. With limited research surrounding CIP, achieving symptomatic treatment during acute phases of CIP has proved to be difficult. The Figure suggests possible treatment progression for CIP. For a mobile-friendly view of the figure, click here.
For more on this topic, see *Cannabis-Induced Psychosis: A Review*, by Ruby S. Grewal, MD and Tony P. George, MD, FRCPC, on which this slideshow is based.