

# Psychotic Symptoms Following Ayahuasca Use in a Ceremonial Setting

Alfonso Martínez Torres, MD; Eduardo Prades Marín, MD; Patricia Sánchez Díez, MD;  
and Jorge Gómez-Arnau Ramírez, MD

Ayahuasca is an Amazonian tisane used in religious ceremonies throughout Central and South America. It is a combination of 2 main plants: *Banisteriopsis caapi* (a vine containing monoamine oxidase inhibiting  $\beta$ -carbolines such as harmine and tetrahydroharmine) and *Psychotria viridis* (containing the hallucinogenic substance DMT [N,N-dimethyltryptamine]).<sup>1</sup> DMT acts as a serotonergic agonist with high affinity for 5-HT<sub>2A</sub> receptors. It produces intense psychedelic experiences, mediated by symptoms such as vivid hallucinations, increased interoception, and a subjective sense of loss of self.<sup>2</sup> In most cases, these sensory disturbances are transient, although psychotic symptoms have been described following its use, particularly in vulnerable populations.<sup>3</sup> We present a case of persistent psychotic symptoms following ayahuasca use in a patient with no history of psychiatric disorders.

## Case Report

In January 2022, a 43-year-old woman with no history of psychiatric or neurologic disorders was admitted to the intensive care unit (ICU) after presenting with an episode of tonic-clonic seizures requiring orotracheal intubation, which resolved after administration of intramuscular diazepam 15 mg. In the ICU, assessment by the psychiatric consultation-liaison team was requested due to the onset of cenesthetic hallucinations, described by the patient as an increased sensitivity to electromagnetic

fields around her. The patient was convinced that her “vital energy” was being drained by these fields. She also experienced speech lagging, blocking of thoughts, and decreased mood, which she attributed to the action of these fields. The symptoms appeared after the patient regained consciousness and persisted for the next 3 days before the evaluation.

The patient described 3 ayahuasca ingestions in the previous 3 months, always in a ritualistic setting, with no changes in the accompanying features of the experiences (same group of people, location, and spiritual guides). The last use of ayahuasca took place 3 days before the episode. The patient denied using other substances, and no other possible triggers for the convulsive episode were found.

After administration of risperidone 2 mg/d for 1 week, these symptoms remitted, and the patient experienced a full recovery. During this time, she was also assessed by the neurology team, who also discharged the patient as no neurologic symptoms remained. Additional tests performed at discharge (magnetic resonance imaging, electroencephalography, blood tests) were unremarkable.

## Discussion

Several cases of persistent psychotic symptoms after ayahuasca/DMT ingestion have been described in previous case reports and case series. In most cases, patients experiencing these persistent psychotic states had a history of mental health problems, such as a previous diagnosis of psychotic disorder, substance use disorder, or both.<sup>4–8</sup> For example, as reported by Palma-Álvarez et

al,<sup>9</sup> a man with a history of cocaine abuse was admitted to an inpatient psychiatric unit after taking ayahuasca for therapeutic purposes. His psychotic symptoms persisted for several weeks. In the case presented here, perhaps the absence of a psychiatric history could explain the short duration of the psychotic symptoms, although they were clearly schizophreniform in nature.

In ayahuasca ceremonial settings in Latin America, no difference in the incidence of psychotic disorders compared to the general population has been described.<sup>8</sup> The impact of ayahuasca may be less predictable in the Western world, even more so outside of religious settings.

With the increase in recreational and ritual/therapeutic use of ayahuasca and similar psychedelic substances worldwide, the medical community should implement a corresponding increase in observation and precautionary measures, ensuring whenever possible the minimization of risks in patients with a psychiatric history, thus identifying high-risk groups. Evaluation of the conditions and safety of the environment in which these substances are ingested should also be a priority given the growing interest in their use.

## Article Information

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**Author Affiliations:** Department of Psychiatry, Hospital Universitario Ramón y Cajal, Madrid, Spain (all authors).

**Corresponding Author:** Alfonso Martínez Torres, MD, Hospital Universitario Ramón y Cajal, Madrid, Spain (alfonsomartineztorres95@gmail.com).

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