

A Bulletin for Healthcare Professionals Who Manage Poisoned Patients

In Partnership with the UVA Division of Medical Toxicology - Department of Emergency Medicine

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Salvia Divinorum

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Salvia divinorum, commonly known as Salvia, is a psychoactive plant in the mint family (Lamiaceae), native to Oaxaca, Mexico. It has been used for centuries by the Mazatec people from this region for spiritual practices, rituals, and healing purposes. Salvinorin A is the primary active compound in the plant and is unique in that it is a potent kappa-opioid receptor agonist. This distinguishes salvia from most other hallucinogenic plants that act primarily via serotonergic systems (i.e., LSD, psilocybin). Salvinorin A is considered one of the most potent naturally-occurring hallucinogens, with clinically active doses in the 200-500 microgram range. It rapidly crosses the blood-



brain barrier and its effects onset in about 30 seconds after smoking. Despite its high potency, it has a short duration of action of about 5-15 minutes when smoked or vaporized at typical doses, which causes an intense, short-lived psychoactive experience.

Clinical Presentation

Salvinorin A's kappa-opioid receptor agonism results in profound alterations in perception including depersonalization, dissociation, and dysphoria. Patients exposed to salvia may present with abrupt onset of vivid auditory & visual hallucinations and detachment from reality. Unlike serotonergic hallucinogenic plants, which generally cause euphoria, patients using salvia more often describe disorienting or unpleasant experiences. Episodes are often accompanied by uncoordinated movements and confusion. While some users report intense spiritual experiences, many others find the effects frightening or overwhelming. Vital signs are usually normal or show mild elevations in heart rate or blood pressure. There is no specific associated typical toxidrome. Salvia itself has not been found to cause significant adverse toxicity, addiction potential, or overdose deaths. The danger in

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Heather Collier Debbie Philkil using salvia comes from psychological distress and/or the potential for accidental traumatic injury during dissociative episodes. Because salvia has a rapid onset and brief duration of action, symptoms often resolve by the time the patient presents to a healthcare facility or shortly afterward.

Diagnosis and Management

Confirmation of exposure requires specialized laboratory techniques such as gas or liquid chromatography-mass spectrometry and is generally not available and is unnecessary for clinical care. Diagnosis is clinical and based on history, context, and presentation. Management is supportive; a calm environment is generally sufficient to allow for full recovery. Benzodiazepines can be helpful in patients with significant anxiety or agitation.

Epidemiology

While Salvia use is not generally widespread in U.S. society, it does remain fairly prevalent in the young adult population with a lifetime use estimated at around 1.4% in this age group. It has been mentioned in mainstream media in the past, which causes a transient increase in its use. Its use is currently legal in 21 U.S states; however, it is illegal in Virginia but still utilized in state based on poison center data. Education about the nature of the psychoactive experience and the potential for adverse psychological effects may help prevent experimentation with this drug, particularly among adolescents.

If you have further questions, please do not hesitate to contact the UVA Health's Blue Ridge Poison Center 24/7/365 at 1-800-222-1222. You may also reach us using the dedicated provider hotline: 1-800-451-1428.