ToxTalks:

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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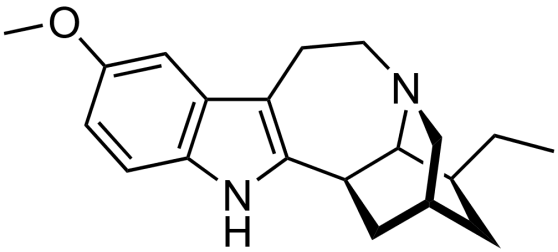
Ibogaine

What is Ibogaine?



Ibogaine is a naturally occurring psychoactive alkaloid derived from the root of *Tabernanthe iboga*, a shrub native to Central Africa. Historically utilized in traditional ceremonies by the Bwiti and Mbiri people, it has garnered attention for its potential in treating substance use disorders, particularly opioid and alcohol dependence. Developing research suggests that ibogaine mitigates drug-seeking behavior by preventing craving and withdrawal. Ibogaine has hallucinogenic properties, which was highlighted recently on a popular podcast; this could increase public awareness and result in an increase in exposures. Ibogaine induces vivid hallucinations, which some patients describe as psychologically insightful. Despite the promising reports, ibogaine is also associated with risks and is currently classified as a Schedule I substance in the United States. Although research is ongoing, available evidence regarding the efficacy and risks of ibogaine use is currently very limited.

Administration and Mechanisms of Action

Ibogaine is generally administered orally at a dose of 10 to 25 milligrams/kilogram of body weight based on multiple reports, and repeat doses over several days are common. Its mechanism of action is complex and it likely exerts its effects through multiple pathways. Ibogaine and its active metabolite, noribogaine, are antagonists at both nicotinic acetylcholine receptors and NMDA receptors. They also have some reported effect as agonists at kappa & mu opioid receptors and likely modulate serotonin and dopamine activity in the brain. Because ibogaine has multiple mechanisms of action, it causes various side effects. Derivatives of ibogaine with more straightforward mechanisms of action are currently being studied and produced in an attempt to mitigate these unwanted adverse effects.

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Adverse Effects and Risks

While ibogaine may provide therapeutic benefits, its administration is associated with potential risks. Ibogaine has been reported to cause cardiotoxicity in case reports and case series, specifically at the high doses used to treat substance dependence. Prolongation of the QT interval is reported and can lead to additional ventricular dysrhythmias. Bradycardia and hypotension are also frequently reported in animal studies. There have also been reports of seizures after exposures as low as 20 mg/kg. The most commonly reported adverse effects after ingestion of ibogaine are nausea & vomiting. As discussed above, ibogaine is also a hallucinogenic substance, and users have reported experiencing "bad trips", potentially leading to unwanted psychologic effects.

Clinical Monitoring and Management

Healthcare professionals managing patients who have taken ibogaine should monitor cardiac function via ECGs to detect QT prolongation and dysrhythmias and keep patient on continuous telemetry while symptoms persist. Electrolyte levels should be assessed and imbalances corrected, particularly hypokalemia and hypomagnesemia. Ibogaine is not detected on routine hospital urine drug screens. If patients develop QT prolongation > 500 milliseconds, magnesium sulfate should be administered. In addition to magnesium, overdrive pacing or

The psychedelic drug ibogaine is derived from the roots of iboga, pictured above.
STEEVE JORDAN/Getty Images. From Medical News Today

isoproterenol should be considered if polymorphic ventricular dysrhythmias develop. Seizures should be treated with benzodiazepines. It is also important to ensure a calm, controlled environment and provide adequate hydration until hallucinogenic symptoms subside.

Legal and Ethical Considerations

Ibogaine remains illegal in the United States, but it is used in unregulated clinics in other countries and can be obtained in the US through the internet. Patients seeking treatment abroad may not disclose their use due to stigma or fear of legal repercussions, complicating clinical care. Nonjudgmental, evidence-based communication is essential when managing such cases.

Conclusion

Ibogaine has increased in popular culture recently as a potentially promising innovative approach to addiction treatment, but carries significant risks, particularly to the psychologic, cardiovascular, and central nervous systems. Thorough monitoring and supportive care are paramount to mitigating adverse outcomes.

For consultation or further assistance, please contact the University of Virginia's Blue Ridge Poison Center/Division of Medical Toxicology directly at 1-800-222-1222 or call the **dedicated provider hotline: 1-800-451-1428.**

References available upon request