

Acute Unsustained Lingual Dystonia After Intake of Giloy Ghanvati (*Tinospora cordifolia*)

Arpita Negi, MBBS; Shobit Garg, MD, DPM; Rupali Rohatgi, MD; and Simran Chowdhry, MD

T*inospora cordifolia* (Family: Menispermaceae) is a traditional plant used in ayurvedic medicine for its general tonic, antiperiodic, antispasmodic, anti-inflammatory, antiarthritic, antiallergic, and antidiabetic properties and in the treatment of various other diseases. In vitro receptor-binding studies were also done to correlate the antipsychotic activity of the plant extract with its capacity to bind to the DA-D2 receptors. The effect of aqueous ethanolic extract of *Tinospora cordifolia* was investigated for its putative antipsychotic activity using an amphetamine-challenged mice model.¹ The plant extract increased the DA-D2 receptor binding in a dose-dependent manner in treated mice compared to the control group.¹ Acute dystonic reactions consist of intermittent or sustained muscle spasms and abnormal postures. These dystonic reactions most often affect the cranial, neck, and trunk musculature, but abnormal movements of the arms and legs can also be seen. About 2.5% of patients treated with neuroleptic drugs develop acute dystonia within 48 hours of starting therapy. The symptoms remit on drug withdrawal or following anticholinergic therapy.² However, reports of adverse effects associated with its use, particularly in conjunction with substances like alcohol, are limited. The data on *Tinospora cordifolia* are scarce; therefore, we present a rare case report showing an acute presentation of unsustained lingual dystonia after consumption of giloy ghanvati (*Tinospora cordifolia*), which is an ayurvedic

herbal preparation, along with alcohol consumption in a dependent pattern.

Case Report

A 35-year-old man presented to the emergency department with complaints of frequent protrusion of the tongue and was in an intoxicated state after consuming alcohol on a daily basis. The last intake of alcohol was 2 hours before coming to the hospital. His vital signs including blood pressure, heart rate, temperature, and oxygen saturation were within normal limits, and no other medical comorbid condition was present. His biological functions were normal. There were no other features of dystonia. According to his parents, he consumed 4 tablets equivalent to 2 g of giloy ghanvati, which he had taken after 1 hour of consuming alcohol. The lingual dystonia (Figure 1) started after 30 minutes of consuming the giloy ghanvati tablet and lasted for 1 hour. There was no history of fever, vomiting, acute confusional state, other psychomotor agitation, gastrointestinal disturbance, or other neurological deficit. He was given injectable promethazine 25 mg intramuscular, and his dystonic features subsided. The patient was admitted to the psychiatry ward for further evaluation and management. His Clinical Institute Withdrawal Assessment for Alcohol Scale-Revised³ score was 8 out of 67, indicating mild withdrawal. At the time of discharge, the patient was prescribed tablet trihexyphenidyl 2 mg twice daily, tablet lorazepam 2 mg 3 times daily, and tablet pantoprazole 40 mg once daily and was advised for follow-up after 7 days.

Non-contrast computed tomography of the head detected no significant abnormality. The patient had been consuming alcohol for the past 5 years. There was no history of other substance abuse like cannabis, opioids, or central nervous system stimulants. There was no history of delirium or any other confusional behavior. There was no history of mood disturbance or any other feature of psychiatric illness present in the patient.

Discussion

The case underscores the need for greater awareness of potential adverse effects associated with herbal medications, specifically *Tinospora cordifolia*, in patients with a history of substance dependence, noting an increased incidence of dystonia in this group. γ -aminobutyric acid (GABA)ergic neurotransmission significantly affects the central nervous system's plastic responses to sensory stimuli. Together with dopamine, GABA is closely linked to the electrophysiological mechanisms underlying dystonia. During alcohol

Figure 1.
Patient With Lingual Dystonia



withdrawal, reduced GABAergic transmission may increase the risk of developing dystonia, potentially influenced by *Tinospora cordifolia*.⁴ Further research is essential to elucidate the mechanisms behind such reactions and to establish safer guidelines for the use of *Tinospora cordifolia* in conjunction with other substances. This case highlights the need for careful monitoring of patients taking *Tinospora cordifolia*, particularly when combined with alcohol. As ayurvedic medicines gain popularity, understanding their pharmacologic interactions and potential side effects becomes crucial for patient safety.

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Author Affiliations: Department of Psychiatry, Shri Guru Ram Rai Institute of Medical and Health Sciences, Shri Guru Ram Rai University, Dehradun, Uttarakhand, India (all authors).

Corresponding Author: Simran Chowdhry, MD, Department of Psychiatry, Shri Guru Ram Rai Institute of Medical and Health Sciences, Shri Guru Ram Rai University, Dehradun, Uttarakhand 248001 India (drsimranchowdhry@gmail.com).

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Patient Consent: Informed consent was taken from the patient regarding the details and publishing of the case material and the photograph. Information has been de-identified to protect patient anonymity.

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