

A CASE OF PSYCHOSIS PRECIPITATED BY INGESTION OF HERBAL TEA MADE WITH HAWAIIAN BABY WOODROSE (*ARGYREIA NERVOSA*)

Introduction

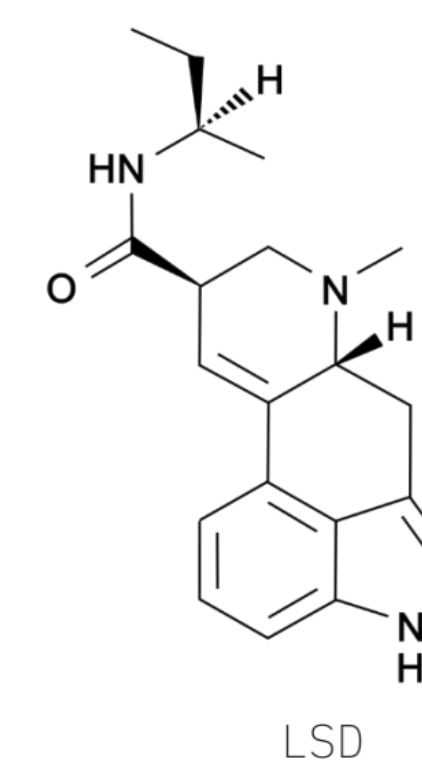
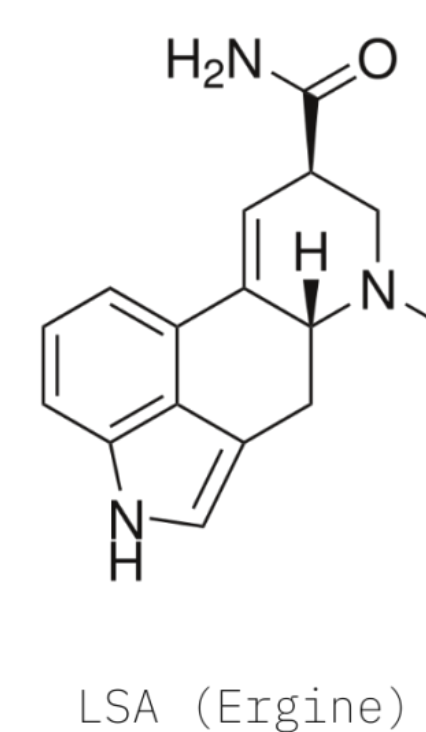
- Seeds of the Hawaiian Baby Woodrose (HBWR; *Argyreia nervosa*) contain various ergot alkaloids, including lysergic acid amide (LSA), a chemical relative of lysergic acid diethylamide (LSD)¹
- LSA mechanism of action is not fully understood; effects are noted at dopaminergic D2, adrenergic, and serotonergic receptors, with a preference for the 5-HT2 receptor subtype²
- US poison centers reported that 7% of individuals who ingested HBWR seeds suffered from severe neurological sequelae, with 41% experiencing agitation, irritability, confusion, lethargy, hallucinations, delusions, muscle weakness, tremor.³
- Information about clinical implications and course of intoxication-related psychiatric and somatic symptoms after HBWR seed consumption as well as therapy is sparse and mostly anecdotal¹

Case Description

- 18M presents to clinic with psychosis after participating in a Hawaiian ceremony
- This was patient's 2nd presentation with psychosis after a Hawaiian ceremony
- Prior to his first consumption of Hawaiian tea, no hx of psychotic or mood symptoms
- No significant medical history or family history of mental illness
- Patient did acknowledge marijuana use without psychotic or mood adverse effects
- Patient was treated with Abilify with good effect and resolution of symptoms

Clinical Course and Treatment

# Day	Findings
Day 1-2 Inpatient Psychiatry Unit	<ul style="list-style-type: none"> - First episode of psychosis after consuming Hawaiian tea - Admitted to state psychiatric hospital for 2 days - Discharge diagnosis of "Substance-induced psychotic disorder". No meds prescribed. - Full resolution of symptoms within 3 days from onset
Day 24 Resident Clinic	<ul style="list-style-type: none"> - Presenting symptoms: flat affect, total 8 hour sleep in prior 5 days, not eating, echolalia, echopraxia, verbigeration, religious delusions, perseveration "fried chicken" - Pt admitted drinking the Hawaiian tea prior to sx recurrence - L2K for inability to care for self. Transfer to UMC ED
Day 24 Academic Medical Center ER	<ul style="list-style-type: none"> - Admission vitals: T 97.6F, HR 57, BP 112/64, RR 16 - UDS negative - ER provider noted: "Patient has pressured speech and is not cooperative with my exam as he continues to mimic my questions." - PRN's received: Zyprexa zydis 5mg PO, Benadryl 25mg PO, Ativan 1mg IM
Day 25 Academic Medical Center ER	<ul style="list-style-type: none"> - Pt was oriented x4, bilateral hand tremors, responding linearly to questions with intermittent incoherence ("I understand people think I am not being regular according to the regularization"), repeating "RLO RLO RLO" when asked to spell WORLD backwards. Denied SI, HI, AH, VH. - PRN's received: aripiprazole 5mg PO - Discharge dx "Substance-induced psychotic disorder" - Discharge med: Aripiprazole 5mg PO daily for psychosis
Day 32 Resident Clinic	<ul style="list-style-type: none"> - 1-week outpatient psychiatry follow-up - Pt had completed 3 days of aripiprazole - Mental status at baseline. Complete resolution of psychosis - Aripiprazole discontinued. Substance cessation counseling provided



Discussion

- Our patient's presentation is consistent with reported sequelae of HBWR ingestion as in published case reports
- Our patient may have had less severe symptomatology due to the mode of ingestion (brewed tea, not ingestion of full seeds), compared to published case reports where full seeds were ingested
- This may have contributed to shorter hospitalization and higher likelihood of outpatient treatment success
- Diagnostic challenge: LSA is detected in urine only within 24 hrs after consumption
- There are no established treatment guidelines for LSA-induced psychosis
- Published case reports describe treatment with aripiprazole up to 10mg/day and PRN lorazepam up to 2mg/day

Conclusion

- Our case report adds to a growing body of literature characterizing substance-induced psychosis in a young adult due to consumption of HBWR, which contains LSA
- Our case adds evidence for successful treatment of LSA-induced psychosis/prolonged intoxication with low-potency atypical neuroleptics and PRN benzodiazepines
- HBWR seeds remain legal to purchase in USA; more research is needed on possible harmful effects of herbal psychedelics

References

1. Sobanski E, Dalm S, Sievers L, Külzer T, Liesenfeld H, Schmidt-Kittler H, Huss M. Herbal High: Substance-Induced Psychosis after Consumption of Seeds of the Hawaiian Baby Woodrose. *Z Kinder Jugendpsychiatr Psychother*. 2021 Jul;49(4):307-311. doi: 10.1024/1422-4917/a000792. Epub 2021 Mar 4. PMID: 33661700.
2. Paulke, A., Kremer, C., Wunder, C., Wurglics, M., Schubert-Zsilavecz, M. & Toennes, S. W. (2015). Studies on the alkaloid composition of the Hawaiian Baby Woodrose *Argyreia nervosa*, a common legal high. *Forensic Science International*, 249, 281-293.
3. Forrester, M. B. (2018). *Argyreia nervosa* exposures reported to Texas poison centers. *Journal of addictive diseases*, 37(3-4): 160-164. <http://doi.10.1080/10550887.2019.1640057>