

Datura



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The Case(s)

- A family of 6 admitted to the hospital after consuming “herbal tea”
- Other family members concerned about their behavior
 - Hallucinations
 - Agitation
- The herbal product was recommended as “refreshing”
 - The family did not know what the herb was
 - Plant later discovered to be a Datura species

Case Specifics

- 67 yoM
 - Required restraints
- 32 yoF
 - Pupils dilated
 - Dry mucous membranes
- 38 yoF
 - Pupils dilated
 - Respiratory acidosis
 - Hx depression
- 22 yoF
 - Severe agitation
 - Hx bipolar disorder
- 15 yoM
 - Mucus and skin hot, dry
 - Respiratory acidosis
- 50 yoM
 - Restlessness
 - Drowsiness

History



- Numerous common names
- Multiple uses over thousands of years in several cultures
- Used as part of some Native American ceremonies
 - “I ate the thornapple leaves/And the leaves made me dizzy/I drank thornapple flowers/And the drink made me stagger...”
- Reported use in poisonings and suicides

Datura Species

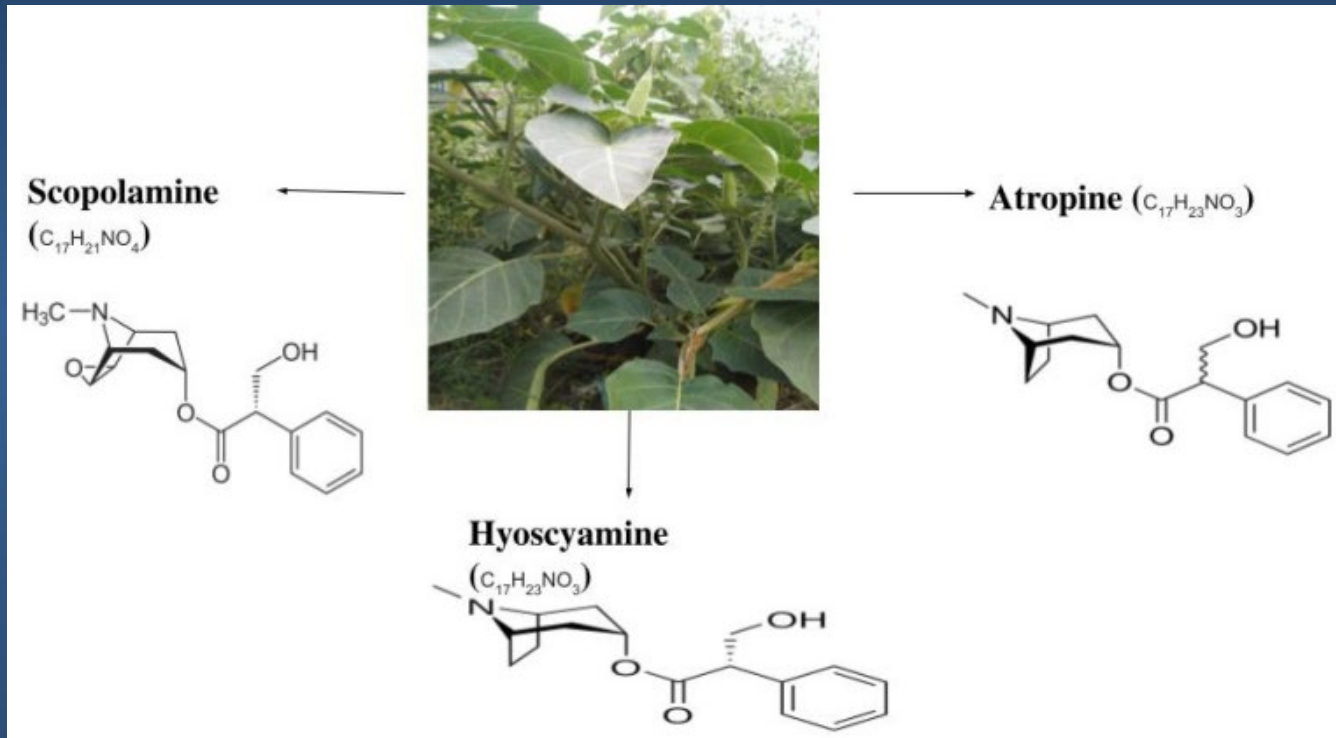
- In the Solanaceae (nightshade) family
- Numerous species with some debate/controversy
 - Approximately nine formally recognized Datura species
- Some notable species in the Sonoran desert:
 - *D. discolor*
 - *D. wrightii*
- Primarily located in Mexico



Where Does it Appear?

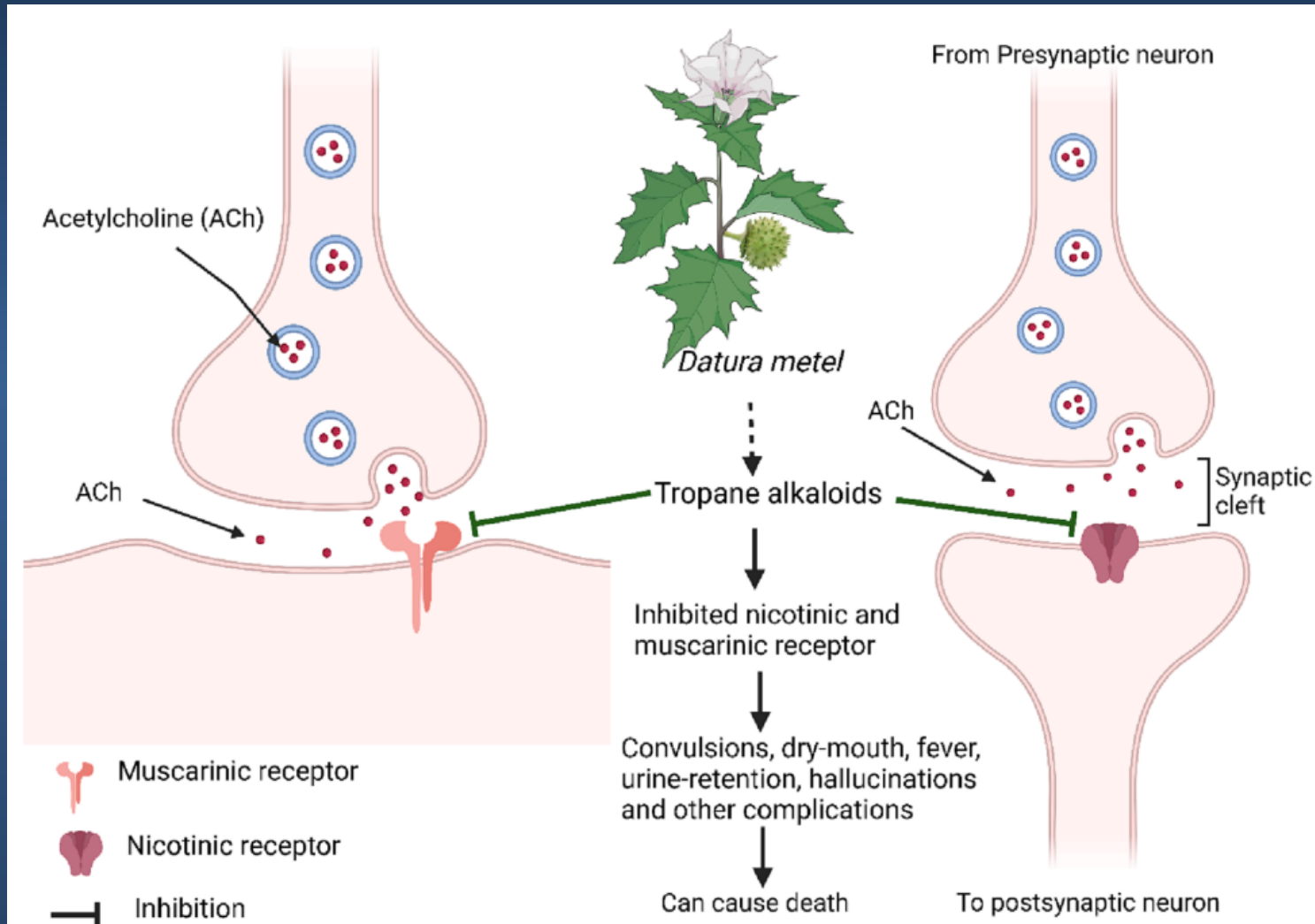
- Depending on location, can be very prevalent
- May appear as a roadside weed
- Could be mixed in or around crops
- Typically ignored by most animals

What's in It?



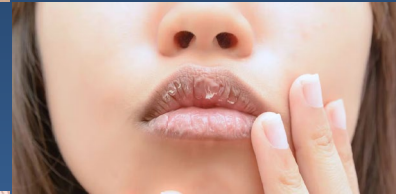
Sharma M, Dhaliwal I, Rana K, Delta AK, Kaushik P. Phytochemistry, Pharmacology, and Toxicology of Datura Species-A Review. Antioxidants (Basel). 2021;10(8):1291. Published 2021 Aug 15. doi:10.3390/antiox10081291. Figure 1.

Toxicity



Anticholinergic Syndrome

- “Red as a beet”
- “Dry as a bone”
- “Blind as a bat”
- “Mad as a hatter”
- “Hot as a Hare”
- “Full as a flask”



Management

- Gastric decontamination
 - Activated charcoal
 - May be more useful even hours later due to anticholinergic effects
- Conventional cooling measures for hyperthermia
- Sedation w/ benzodiazepines
 - May hold off in children to consider other causes

More Severe Case Management

- Physostigmine antidote of choice
- Consider in the setting of:
 - Arrhythmias
 - Severe hypertension
 - Convulsions
 - Coma
- May need to readminister due to short half-life
- Use with caution

Case Conclusion

- 67 yoM
 - Fluids, midazolam
 - Full recovery after 2 days
- 22 yoF
 - Midazolam, haloperidol
 - Full recovery after 1.5 days
- 32 yoF
 - Fluids, midazolam, IV diazepam
 - Full recovery after 1 day
- 15 yoM
 - Fluids + high dose midazolam
 - ICU x 2 days, 1 day obs
- 38 yoF
 - O2, midazolam, IV diazepam, fluids
 - Full recovery after 1.5 days
- 50 yoM
 - Hydration
 - Full recovery after 9 hours

Conclusion

- Higher degree of misuse in adolescents
- Can appear deeply concerning on presentation
- With supportive management, tends to resolve fairly quickly
- Low rate of death