

Poisoned after Dinner: Dolma with Datura Stramonium

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SUMMARY

Datura stramonium, which is also known as Thorn Apple or Jimson Weed, is an alkaloid containing plant that is entirely toxic. The active toxic constituents of the plant are atropine, scopolamine and hyoscyamine. It has been abused worldwide for hundreds of years because of its hallucinogenic properties. Previous reports have shown that herbal medication overdose and accidental food contamination are ways it can cause poisoning. Herein we present a family that had three of its members poisoned after eating a traditional meal “dolma” made of datura flowers. None had fatal complications and all were discharged healthy. *Datura stramonium* may be used accidentally as a food ingredient. Since its poisonous effects are not known, people should be informed and warned about the effects of this plant.

Key words: Anticholinergic effects; *Datura stramonium*; plant poisoning; rhabdomyolysis.

Introduction

Datura stramonium is an annual, leafy herbaceous plant that is a powerful hallucinogen that causes delirium. Because of this, it is often used in “love potions and witches’ brews.” Since all parts of the plant are toxic, poisoning may occur after consuming any part of the plant.^[1-5] *Datura* causes anticholinergic toxicity since it contains atropine, scopolamine and hyoscyamine. The classical symptoms of poisoning are tachycardia, hyperthermia, dryness of skin and mucous membranes, reddening of skin, visual defect, speech disorder, a decrease in intestinal sounds, urinary retention, agitation, disorientation and hallucination. The symptoms generally occur 1-4 hours after ingestion and may continue 24-48 hours depending on gastric depletion.^[6]

Dolma is a traditional Turkish meal that is made by mixing rice and small chopped vegetables with the leaves of vari-

ous green plants (generally grapevine, cabbage, pumpkin flower, etc.).

Herein we present a series of *Datura stramonium* poisoning that occurred after eating dolma prepared with *Datura* flowers. Three patients in the same family were affected and cured successfully.

Case Report

A family was admitted to our university hospital-based Emergency Department (ED) with similar complaints after eating the same meal. The father had eaten nine pieces of dolma made with *Datura* flowers, while the mother and daughter had eaten one each. All three had anticholinergic symptoms and were managed as having anticholinergic poisoning due to herbal origination. All were discharged healthy.

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Case 1 (Mother) — A 58-year-old woman was brought to the ED with complaints of changes in consciousness, visual impairment and hallucinations. Her accompanying relatives indicated that she ate one piece of dolma made with the *Datura stramonium* flower six hours before the initiation of her complaints. Her past medical history revealed nothing pathologic, she did not take any ongoing medication, and she did not have allergies or substance addiction. In the first examination, her vitals were as follows: blood pressure, 110/60 mmHg; pulse rate, 124/minutes; respiration rate, 24/minute; and axillary temperature, 36.8°C. She had a Glasgow

Coma Scale (GCS) score of 12 (E4V2M6), her pupils were mydriatic, she had tachycardia and tachypnea, her mucous membranes and skin were dry and red, and her bowel sounds were decreased. There were no other pathologic physical findings. Sinus tachycardia with PR interval of 0.16 seconds, a QRS duration of 0.08 seconds, and a corrected QT interval of 0.46 seconds were seen in her electrocardiogram (ECG). The patient's laboratory results are summarized in Table 1.

The patient was assessed and diagnosed as having anticholinergic poisoning, and therefore, proper management with airway control, oxygenation, hydration and observation

Table 1. Initial laboratory results of the patients

	Normal values	Case 1 (Mother)	Case 2 (Father)	Case 3 (Daughter)
WBC (uL)	4-10	6.2	7.0	12.6
Hgb (g/dL)	11-18	12.3	14.8	13.1
Hct (%)	37-54	33.5	41.6	37.2
Plt (uL)	150-500	176	214	263
Glucose (mg/dL)	70-105	157	143	91
AST (U/L)	0-31	33	43	17
ALT (U/L)	<31	28	22	15
Amylase (U/L)	28-100	83	56	48
BUN (mg/dL)	8-25	9.5	16.9	12
Creatinine (mg/dL)	0.8-1.2	0.5	0.9	0.5
CPK (U/L)	<170	160	233	157
CK-MB (ng/mL)	0.97-4.97	3.43	2.41	1.56
Troponin T (ng/mL)	<0.1	<0.01	<0.01	<0.01
PTZ (sec)	11-15	12	12.8	12.7
INR	0.85-1.25	1.0	1.08	1.07
aPTT (sec)	25.3-34.6	21.7	24.7	23.5
pH	7.35-7.45	7.34	7.40	7.40
PaCO ₂ (mm/Hg)	35-45	43.8	34.1	38.4
PaO ₂ (mm/Hg)	98-100	95	98	98
HCO ₃ ⁻ (mEq/L)	22-24	23.6	20.07	23.4

Table 2. CPK and cardiac biomarker levels of the Case 2

Day	CPK (U/L)	CK-MB (ng/mL)	Troponin T (ng/mL)
1	233	2.41	<0.01
2	221	9.97	0.001
3	1252	30.83	0.09
4	2666	34.84	0.20
5	1769	7.50	0.29
6	852	3.75	0.34

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