Datura Stramonium Poisoning: Two Case Reports

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Introduction
Datura stramonium is a wild plant, which grows in almost every region of Turkey and is found in the native flora. D. stramonium is used as a herbal medicine for asthma, bronchitis, eczema, and hemorrhoid treatment. Because of D. stramonium's hallucinative and euphoric effects, it can be abused, particularly by drug addicts. Excessive oral intake may cause anticholinergic toxicity. In the case of a very high dose intake, it may result in coma. In this study, we have discussed two patients who presented to the emergency department of our hospital with anticholinergic findings and were diagnosed with D. stramonium intoxication.

Case Reports

Case 1. A 64-year-old male patient ingested D. stramonium, which he had found in his garden. He presented to the emergency department of our hospital upon experiencing exhaustion, nausea, dryness in the mouth, and difficulty in passing urine. On physical examination, the patient looked agitated, and he was indulging in a meaningless conversation in a confused state. His tongue was dry and pulse was tachycardic. Other system examinations such as liver function tests, renal function tests, cardiac troponin test, electrolyte test, and complete blood cell count were normal. The urine toxicology test was normal. Si-
seed contains 0.1 mg of atropine (8). Both of our patients stated
(7). Literature reports that D. stramonium, which has an origin dat-
ing to ancient times, has caused epidemic deaths during the course
of history. D. stramonium is 20–100 cm tall, has an erect stem with
7–14 branches, and produces black seeds and green fruits of 3–4 cm
of oral intake. The first symptoms include hallucinations, dryness of
mucous membranes, thirst, dilated pupils, and visual and speech
disorders. In the further stages, symptoms including tachycardia,
urinary retention, and ileus occur. Rarely, hyperthermia, respiratory
arrest, and convulsions may be observed. Moreover, death due to
central nervous system depression, circulatory collapse and hypo-
tension may occur (7). In one of our patients, disorder of conscious-
ness, lethargy, and agitation were in the foreground, whereas in the
other patient, urinary retention and dryness of the mouth were the
dominant symptoms. In the following period, severe clinical condi-
tions such as coma, respiratory depression, or seizures did not oc-
cur. The treatment of anticholinergic toxicity is usually palliative care.
Gastric decompression and active coal should be given according
to the classic poisoning algorithm. The vital signs of the patients
should be stabilized. If there is agitation or seizure, it may be treated
with benzodiazepines. Should respiratory failure or coma ensue,
mechanical ventilation support may be required. Physostigmine
therapy is recommended in severe clinical states such as malignant
dysrhythmias, coma, respiratory failure requiring mechanical venti-
lation, and uncontrolled hyperthermia. It is recommended to intra-
venously administer physostigmine 0.5–2 mg. Cardiac monitoring,
monitoring of vital signs, and frequent neurological evaluation are
important in the evaluation of patients (9–10). Our patients were
only treated with palliative treatment and hydration. Both patients
were discharged after 1-2 days of follow-up because they did not
have a severe clinical state.

Discussion
D. stramonium plant was found for the first time in 1676 in the Vir-
ginia state of the United States of USA as a result of accidental use
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ng to ancient times, has caused epidemic deaths during the course
of history. D. stramonium is 20–100 cm tall, has an erect stem with
7–14 branches, and produces black seeds and green fruits of 3–4 cm
(Figure 1). Each fruit contains approximately 100 black seeds, and
seed contains 0.1 mg of atropine (8). Both of our patients stated
that they had ingested these black color seeds. The substance that
leads to anticholinergic poisoning is the belladonna alkaloids they
contain, which are hyoscyamine, atropine, and scopolamine (8). These
alkaloids competitively block the acetylcholine receptors in
the parasympathetic nervous system and the central and periph-
eral muscarinic acetylcholine receptors and cause the signs and
symptoms of poisoning. The clinical signs begin within 30–60 min
of oral intake. The first symptoms include hallucinations, dryness of
mucous membranes, thirst, dilated pupils, and visual and speech
disorders. In the further stages, symptoms including tachycardia,
urinary retention, and ileus occur. Rarely, hyperthermia, respiratory
arrest, and convulsions may be observed. Moreover, death due to
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were discharged after 1-2 days of follow-up because they did not
have a severe clinical state.

Conclusion
Our study reporting the present cases shows that D. stramonium,
which is used for therapeutic purposes, also causes severe intoxica-
tions. Therefore, wild plant poisoning should be considered for every
patient presenting to the emergency department with unexplained
anticholinergic symptoms and complaints.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

Peer-review: Externally peer-reviewed.


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References


