

Cardiac Implications of Oleander Poisoning: Case Series and Treatment Approaches

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Abstract: *Oleander, a highly toxic plant, poses severe risks when ingested, primarily affecting the cardiovascular and gastrointestinal systems. This case series examines three instances of oleander poisoning involving different doses of oleander seeds. The patients, aged 21, 25, and 39, presented with symptoms such as abdominal pain, dizziness, vomiting, and abnormal electrocardiogram ECG findings related to hyperkalemia. Despite aggressive treatment with insulin, dextrose, and salbutamol nebulization, one patient experienced sudden cardiac death, while the others recovered following correction of hyperkalemia and were discharged. This study highlights the importance of promptly addressing hyperkalemia in oleander poisoning, even when typical ECG signs are absent, to prevent life threatening cardiac complications.*

Keywords: Oleander poisoning, hyperkalemia, cardiac glycosides, ECG abnormalities, treatment

1. Introduction

Oleander is an extremely poisonous plant. All parts of the plant are poisonous including leaves, roots and seeds. Most symptoms from oleander poisoning are cardiac and gastrointestinal in nature. The Na / K ATPase pump of the heart is affected, Results in hyperkalemia and a direct cardiac glycoside poisoning effect. Vagotonia and hyperkalemia can cause different clinical features and ECG presentation

2. Case Description

21 yrs old male presented to the emergency department 6 hrs after ingesting 6 oleander seeds, His chief complaint was

abdominal pain, dizziness. O/E conscious, ☐ Pulse – 56/min, irregular

BP - 120/70, Spo2 - 99% Room air, ☐ ABG - k – 10.4, Na – 136, Ca2 – 1.1, ECG - 56/mt, prolonged PR

AV Block

Ecg didn't show the typical features of hyperkalemia, repeatABG – confirmed hyperkalemia, treated with 25% Dextrose, Regular insulin, Nebulisation salbutamol IVF. However, he experiences and sudden cardiac death and could not be revived and died within 2hrs

ECG TAKEN



Case 2

39 yrs Female came to ED, c̄ ingesting 5 seeds of oleander –

c/o Vomitting, Conscious, PR - 70/mt, BP - 110/70mmHg, Spo2 - 100%,

K - 8.23, Na - 142, ECG - Features of hyperkalemia Patient was treated with

25% dextrose & Regular insulin, salbutamol nebulizations, IVF. Hyperkalemia corrected over 24hrs & Patient got discharged after 3 days

ECG taken



Case 3

25 Yrs man presented c̄ ED having 3 oleander seed, c/o Vomitting.
Conscious
PR - 90/mt
BP - 120/70mmHg
Spo2 - 100%
K - 7.24
Na - 130
ECG - 94

Small p wave

T ↓, in II, III, AVF

Repeat ABG - hyperkalemia confirmed

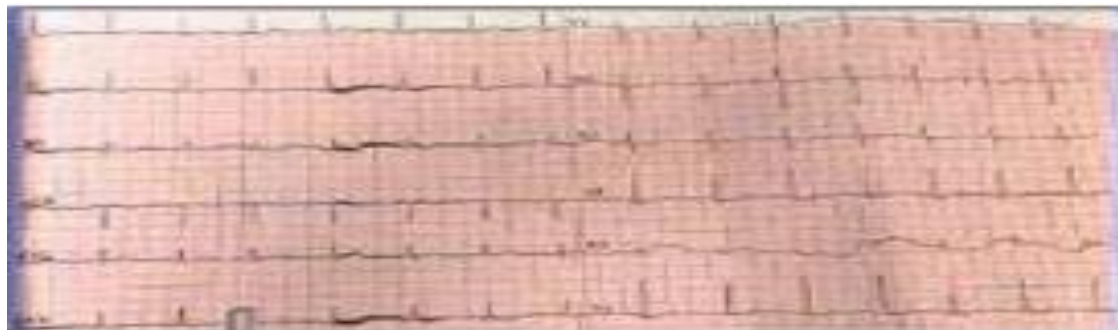
Treated

PPI, ondansetron and IVF

IV 25% dextrose and insulin, salbutamolnebulization

hyperkalemia corrected and patient discharged after 3 days

ECG taken



	VITALS	LAB	ECG
CASE 1	56/mt 120/70 Spo2 - 99%	K - 10.4 Na - 136 Ca - 1.1	prolonged PR c̄ AV Block
CASE 2	70/mt 110/70 Spo2 - 100%	8.25 142	Features of hyperkalemia
Case 3	90/mt 120/70 Spo2 - 100%	7.24 130	Small P wave T↓ in II,III,AVF

Aggressive treatment of hyperkalemia in case of oleander poisoning is key.

Treatment includes insulin - dextrose infusion, atropine, anti-arrhythmic drugs, a temporary venous pacemaker and administration of digoxin - specific Fab antibody fragments.

Hyperkalemia in oleander poisoning should be treated aggressively even if the ECG does not show typical features, because hyperkalemia in oleander poisoning can mimic other conditions.

3. Discussion

Oleander is used as an ornament plant in India. All three of our patients intended to commit suicide. The most serious side effects of oleander poisoning are cardiac abnormalities, Such as ventricular dysrhythmias, bradycardia, and heart block

Two of our patient had uncommon

ECG & one with hyperkalemia

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