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Sweet Scented Oleander - An Ornamental Plant Poisoning - A Case Report

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Abstract: ***Deliberate self-harm by using toxic plant components is observed in many parts of our country, especially in the rural areas. Nerium odorum grows wildly in India and all parts of the plant are poisonous. Several cardiac glycosides are present in the plant which primarily are oleandrin and nerin which cause fibrillation and AV block. Here we are presenting a case of fatal Nerium odorum poisoning brought to our mortuary for autopsy. A 75 year old male was admitted and treated in our tertiary care hospital for oleander seed poisoning. Patient presented with symptoms of GIT and cardiotoxicity. ECG showed absent p waves, AV block. He survived for 24 hours and expired on the second day. This emphasizes the need for knowledge about potential lethal effects of poisonous plants like Nerium; which is mandatory for the clinicians; to treat the case promptly and to reduce the morbidity and mortality.***

Keywords: Oleander, Poisonous, cardiotoxicity

1. Introduction

Nerium odorum grows wild in many parts of India and belongs to family Apocynaceae.

It is grown as an ornamental plant and alluring flowers make it a particular hazard for accidental ingestion.

Common names include kaner, white or pink oleander.

All parts of the plant are poisonous including nector and containing cardiac glycosides.

Leaves are lanceolate and seed pod is slim, cylindrical, dries and splits releasing small seeds tipped with brown hair.

2. Case History

1) A 75-year-old male was admitted in the emergency room with recurrent episodes of vomiting and loose stools after self ingestion of a paste of common oleander seeds.
2) On examination patient was semi-conscious with irregular pulse.
3) Electrocardiogram shows first degree AV block with prolonged PR interval, lead II, III, avf shows low voltage complex, V1-V6 shows poor R wave progression.

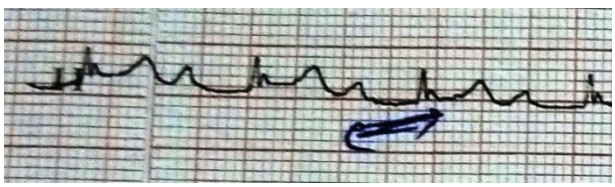

Figure: ECG shows Prolonged PR interval of 0.32 seconds

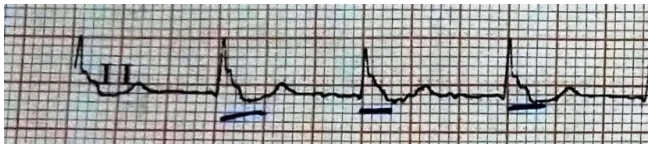

Figure: ECG shows Obliteration of P waves with ST Segment depression.

Postmortem findings:

- Conjunctiva congested.
- Solid organs congested.
- Stomach contained 100 ml of light brown colour fluid.
- Mucosa congested with erosions here and there.
- Petechial haemorrhages seen on the surface of the heart.

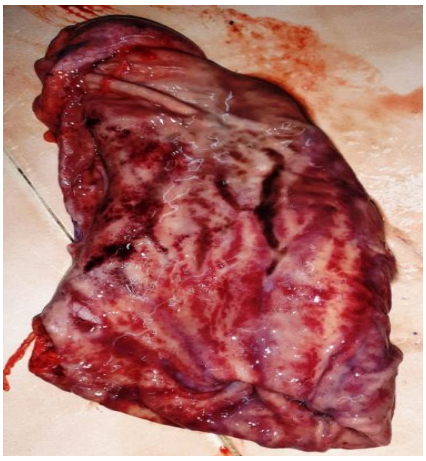

Figure: Stomach mucosa is congested with erosions here and there.

Investigations

Viscera and blood preserved and sent to RFSL for chemical analysis and the report is awaited.

3. Discussion

- Most of the plants, including foxglove and oleander, have been identified as containing cardiac glycosides. Nerium odorum contains active principles like nerin, oleandrin, folinerin and rosagenin.
- The cardiac glycosides in oleander produce more gastrointestinal effects than those in digoxin.
- The most serious effects of oleander poisoning are cardiac abnormalities, including various ventricular dysrhythmias, tachyarrhythmias, bradycardia and heart block.
- Electrocardiography often reveals an increased PR interval, absence of P wave, a decreased QRS-T interval, and T wave flattening or inversion. It is thought that these clinical manifestations are the result of both increased vagotonia and direct cardiac glycoside toxicity.
- Fatal dose: 8 to 10 seeds.
- Fatal period: 24 to 36 hours.
- The treatment of oleander poisoning is empirically based on the treatment of cardiac glycoside toxicity and consists of supporting the patient hemodynamically.
- This may include administering atropine for severe bradycardia; using phenytoin or lidocaine hydrochloride to control dysrhythmias; placing a temporary venous pacemaker; or electrical counter shock and administering digoxin-specific Fab antibody fragments (Digibind).

4. Conclusion

1) It is interesting that kaner poisoning can be fatal with relatively small amounts of ingestion of its components leading to atrial and ventricular fibrillations and AV block.
2) This emphasizes the need for knowledge about potential lethal effects of poisonous plants like Nerium; for the clinicians; to treat the case promptly and to reduce the morbidity and mortality.

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